


Home nursing and child care



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MALDEN HEALTH SERIES

HOME NURSING AND CHILD CARE

By

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PREFACE

This book has grown out of our teaching experience and presents the subjects of home nursing, child care, and first aid in the form found best suited to students who have profited by a well-organized health-training program at earlier age levels. The material presented is not new except in organization and method of presentation.

Classes at the upper-junior-high-school and lower-senior-high-school levels will find this book a useful and practical classroom guide. Its direct presentation and logical arrangement should make it a useful handbook for child study and adult classes. Mothers will find it a convenient reference book in the home.

We wish to express our sincere appreciation to the following persons for their careful reading of the manuscript and for helpful criticisms and suggestions: Miss Sally Lucas Jean, Consultant in Health Education, New York City; Miss Jessie W. Harris, Head of School of Home Economics, University of Tennessee, Knoxville, Tennessee; and Dr. John A. Ceconi, Director of School Hygiene, Boston, Massachusetts.

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FOREWORD

Every child in the public schools is entitled to have competent instruction in such fundamental health knowledge as will enable him to preserve his own personal health, protect and care for the health of the family, and stimulate him to insist, when a full-fledged citizen, that proper public-health regulations be enacted and enforced. Such instruction, over a period of years, will produce a people capable of creating a healthful environment in their homes and at their work.

In such work and in such a result, the public schools are increasingly interested for it is now well recognized that health education is a primary objective of public education.

This volume is designed to give instruction especially in the matter of the health of the family and contains those essential health facts which are recognized as well adapted to be taught to girls late in the junior, or early in the senior, high school. Such classes were established in the Malden school system in 1919 and have been maintained continuously since that year. They are conducted by a graduate nurse in fully and especially equipped classrooms, and are a compulsory part of the curriculum for all girls of the ninth grade. Ten years' experience with these classes has convinced me of their inestimable value to the pupil, family, and community. I hope and believe that the time is not far distant when such classes will be part of the curriculum of every school system.

FARNSWORTH G. MARSHALL,
Superintendent of Schools,
Malden, Massachusetts.

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HOME NURSING AND CHILD CARE

CHAPTER I

WHAT NURSING MEANS TO THE HOME

Mary came home from school one day to find her mother ill in bed with a cold. Mrs. Johnson felt miserably uncomfortable. She was tired of lying in bed. Her head ached and she could not relax; the bedclothes were all rumpled and loose; the pillows were damp and hot. Mary's heart ached. She wanted to help, but she did not know what she could do to lessen her mother's discomfort. Do you know how to make a patient comfortable?

Susan's married sister had to go to the dentist one morning at nine o'clock. That was just the time for the baby's bath, but it was the only appointment that the dentist could give her.

"Oh, Susan," she said, "if you could only bathe the baby for me and give him his ten-o'clock bottle!"

"That would be great fun," said Susan. "I should love to do it, but I don't know how to bathe and feed a baby."

When your sisters and brothers have cuts or scratches, have you ever thought that you would like to know just how to bandage them? If one of your classmates should faint, would you know what to do to revive her? If you could meet such emergencies with confidence because you knew just what to do, would it not be a source of great satisfaction?

The care of children and the sick in the home has always been the special responsibility of women. Almost every woman at one time or another is called upon to give home care to a sick member of the family, to furnish desirable surroundings for the growth and development of children, and to meet the everyday accidents and emergencies of the home. Wouldn't you like to know how to do these things wisely and well?

A famous American surgeon once said: "The knowledge which a man can *use* is the only real knowledge — the only knowledge which has life and growth in it and converts itself into practical power." The purpose of this book is to give a knowledge of nursing which can be used in everyday life. You will learn the simple nursing technique needed for the intelligent and efficient care of the home patient. You will also gain some knowledge of the scientific care of the infant and young child. Every mother wants her child to be vigorous, healthy, and happy. The child makes his greatest growth and establishes many far-reaching habits during the early years of his life. The mother and older sisters are his teachers during this preschool age.

Thousands of years ago the primitive mother had no guide to aid her in caring for her children or for the sick except what she knew through her own intuition or experience. A certain amount of information gradually accumulated as time went on and the race learned from experience and observation.

Since the time of Pasteur the science of medicine has advanced rapidly. We no longer believe in disease demons or witchery, as did the people of long ago. We know more about the causes of various diseases, and we are able to protect ourselves from many of them.

The advances in medicine and nursing have been so rapid



GIRLS ACQUIRE MUCH PRACTICAL KNOWLEDGE IN
HOME-NURSING CLASSES

that it is difficult for some persons to accept the new ideas. Most persons, however, are not content to cling to the customs of earlier generations, but are eager to take advantage of all the new knowledge which science can offer. An understanding of nursing procedures based upon modern science gives a girl a better equipment for meeting nursing problems than was possible a generation ago.

There are, of course, many well-equipped hospitals and highly trained nurses within the reach of the private family, but there will always be a certain amount of home-nursing care which must be given by the mother or some other member of the family. During the long period of infancy and childhood such care is frequently necessary. Even in adult life there are many cases of slight illness which do not warrant hospital care or the services of a trained nurse, but they do demand proper home care if the patient is to be comfortable and make a speedy recovery. The home attendant works in coöperation with the family physician, carrying out his orders, and reporting to him the things which can be known only by the person who is with the patient constantly.

Such a course as that outlined in this book does not in any sense prepare one to take the place of the graduate nurse. It should, however, help the student to meet those responsibilities which have always been, and will continue to be, the special work of women. To attain some skill in caring for children and ministering to the ills of others is an ideal which is both worthy and practical.

CHAPTER II

SELECTION AND CARE OF THE SICKROOM

If you were ill enough to be in bed for a few days, what sort of room would you like best? You would probably prefer your own room to any other because of its familiar surroundings. Most persons are happier and more relaxed in a familiar setting than in a strange one, especially when they are ill and uncomfortable. The patient's own bedroom is usually selected for the sickroom unless there are marked disadvantages which make it unsuitable. Sometimes it is more convenient to use a room on the first floor of the house. This is often necessary when a woman has to do her own housework as well as look after the patient. A bed can be moved into the living room and the furniture be rearranged so as to make a very satisfactory sickroom. There are many things to be considered and judgment must be used in selecting the room which seems best suited to the particular case.

The patient must always have a bed alone, and, if possible, a room entirely to herself. If two persons ordinarily share a room which has to be used temporarily as a sickroom, the well person should move all her belongings into another part of the house. A patient is much disturbed by having someone tiptoe about the room, opening drawers and closet doors. Furthermore, the drawer and closet space may be needed for extra supplies used by the nurse or attendant * in giving the

* The untrained or partially trained person giving nursing care to the sick is referred to as an attendant.

necessary care ordered by the doctor. However inconvenient it may be to any well member of the family, the patient's room should belong exclusively to her while she is ill.

Requirements of the sickroom.— What are the important things to consider in selecting a sickroom? It should be properly furnished, sunny, easily heated, comfortably ventilated, quiet, and convenient to the bathroom. It is frequently impossible to find one room which meets all of these requirements. Select the room which seems to give the patient the things she needs most.

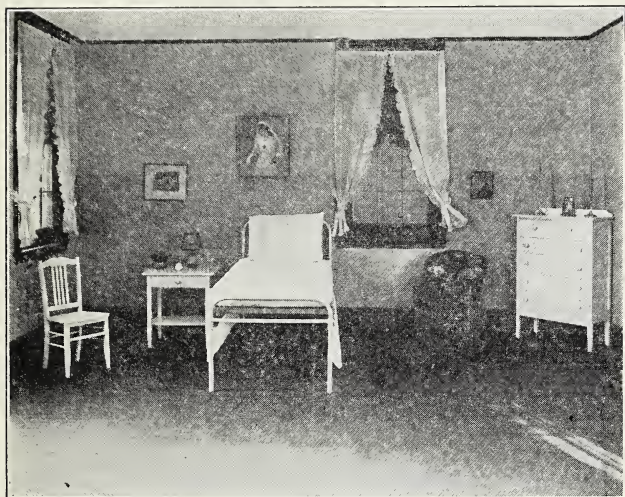
Furnishings of the room. — The sickroom in the home should be simply but attractively furnished. It should not be made to look like a plain hospital room. Marked changes in the room are likely to be annoying, and usually a few simple changes are sufficient to give comfort to the patient and convenience to the attendant. Bric-a-brac and personal articles which the patient is unlikely to use may be put away to make room for any special equipment needed by the attendant. This also simplifies the cleaning of the room.

Let common sense be the chief guide in arranging a temporary sickroom, but be certain that the surroundings are favorable to the patient's physical comfort and mental contentment. Since her strength has already been lessened by disease, her attendant's duty is not only to increase her resistance in every possible way but also to conserve her remaining strength by relieving her of every possible strain. Consider her preferences and tastes as far as possible. Remember that for the time being she is living within four walls and that she will appreciate an attractive room.

Very little furniture is needed — a single enameled iron bed or a plain metal bed, a bedside table, a chest of drawers, and

one or two straight-back chairs. A comfortable arm chair, a footstool, and a sofa or reclining chair add materially to the patient's comfort during the period of convalescence.

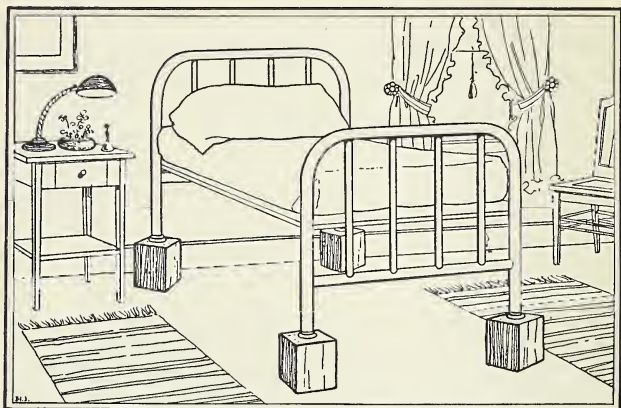
The smooth enamel surface of an iron bed is easily kept



THE SICKROOM IS SIMPLY BUT ATTRACTIVELY
FURNISHED

clean. The wooden bed has many dark cracks which hold dampness, dust, and odors. The wooden bed is usually solid at the head and foot while the iron or metal bed is open and allows free ventilation. The enamel bed can be kept clean by wiping with a damp cloth every morning and by an occasional thorough washing with soap and warm water. It is more difficult to keep a wooden bed clean. An oiled dust

cloth is best to use, but this may be unpleasant for the patient, because the odor of the oil is disagreeable. Another disadvantage of the wooden bed is the danger of scratching the polished surface when using such appliances as the back rest



WOODEN BLOCKS RAISE THE BED TO A
CONVENIENT HEIGHT

or bed cradle. If there is no suitable bed in the house, one must make use of the best bed available. However, the single enamel or plain metal bed is the ideal bed for the sickroom.

The bed should be placed with the head against the wall, giving space all about the bed, so that the attendant can walk around it freely. This is a great help in lifting or moving the patient and in making the bed. Wooden blocks six or eight inches high may be used to raise the bed to a comfortable height so that the attendant need not strain her back in caring for the patient. The rollers, or casters, are removed from the bed when blocks are placed under the legs. Bricks,

old magazines, or boxes may be used in place of blocks. In large cities, wooden blocks can be rented from the surgical supply stores.

Any plain, small table about the height of the bed can be placed at the right of the patient to serve as the bedside table. If it has a polished surface, it should be covered with a piece of oilcloth or rubber sheeting to protect it from stains. A clean linen towel or table cover over the oilcloth makes the table neat and attractive. Remember that the bedside table belongs to the patient and should hold articles for her comfort and convenience.

A convalescent patient usually has the following articles on her bedside table: a small covered pitcher or bottle filled with cold water, a drinking glass, a small reading lamp, and a small hand bell. In addition to these there may be flowers and reading material. The drawer of the table may contain a few of the patient's toilet articles, such as comb, face powder, handkerchiefs, and finger-nail file. The carefully equipped bedside table is a great comfort to the patient because it enables her to do some things for herself. She can pour herself a drink of water, turn on the light, pick up a book to read, or file her nails without ringing for the attendant. These little activities, when permitted by the physician, help the patient to regain her strength and, what is more important, they occupy her mind so that she is less likely to be bored and depressed.

Light and sunshine. — If possible, the sickroom should be flooded with sunshine, because it makes the room cheerful as well as healthful. Sunshine is not only a powerful disinfectant but is also one of nature's best tonics. It will actually help the patient to get well. When heavy draperies are re-

moved from the windows, the room is likely to be more light and airy. The patient should not face a bright light, of course, whether it be natural or artificial. The glare will cause a strain on the eyes and may even cause headache or nausea. The best source of light is from behind or at the side of the patient, and this fact should be considered when placing the bed and the bedside table. A flickering light must be avoided, and an unshaded light should not be used.

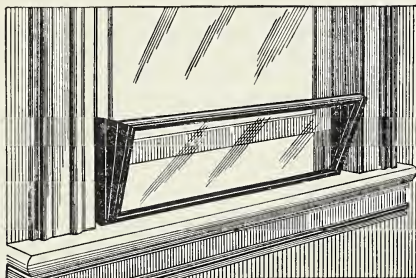
A dark room is best for sleep. If the attendant finds it necessary to have a little light for her own convenience, she can use a flashlight, or a reading lamp may be set on the floor and heavily shaded so that it gives only a faint light. This should be arranged so that it will not bother the patient.

Ventilation. — One of the most important responsibilities of the attendant is to keep the sickroom well ventilated. What are the problems of ventilation? We must supply fresh air, free from dust and disagreeable odors, at the proper temperature, with a suitable amount of moisture, and with a constant motion. If you cannot control all four of these points, do the best you can.

The *temperature* should be kept between 65° and 68° F. during the day and not over 65° F. during the night. The only accurate method of watching the temperature is by the use of a room thermometer. There should always be a thermometer in the sickroom and it should be read several times during the day.

A certain degree of *moisture* in the air makes one feel more comfortable. The amount of moisture in the air is spoken of as humidity. This is usually controlled by having outdoor air enter constantly through windows opened at the top and bottom, since outdoor air usually contains a comfortable

amount of moisture. If the air in the sickroom seems particularly dry, a pan of water may be set on the radiator. Plants and cut flowers add moisture and make the room attractive. They are usually removed at night.



A GLASS DEFLECTOR

(Reproduced by courtesy of The Ideal Ventilator Company)

It is just as important in winter as in summer to have the *air in circulation* and it is as essential to comfort indoors as outdoors. Have you ever heard anyone say, "Oh, there isn't a breath of air!"? What did he mean?

It is possible to have a continuous movement of air in a room without exposing the patient to drafts. When it is cold and windy, a tall screen may be placed between the bed and the window. Another way of keeping the air from blowing directly on the patient is to use an extension screen of close wire mesh, loosely woven cloth, or metal with open slits. These may be placed in the lower part of the window. A deflector of glass or wood may also be used at the bottom of the window to direct the air upward. A window may be opened

in the room adjoining the sickroom and the door left open between the two rooms.

Once or twice a day the room should be thoroughly aired by opening all the windows and doors. This gives a complete change of air and is stimulating to the patient if she is well protected against chilling.

Quiet. — All possible noise should be eliminated in and near the sickroom. Flapping curtains, rattling windows, banging doors, or squeaky chairs are disturbing. (Do you know how to keep a window from rattling?) The attendant moves about the room quietly, but naturally. Whispering and tiptoeing are usually extremely annoying to a person who is ill. Unusual noises about the house should be avoided and the regular housework should be done as quietly as possible.

The bathroom. — A bathroom adjoining the sickroom or very near it on the same floor not only saves the time and strength of the attendant but is also very convenient for the convalescent. A patient is able to walk a short distance on one floor once or twice a day long before she is able to go up and down stairs. If the bathroom is near, she can partly take care of herself by doing such things as brushing her teeth or washing her face and hands. This relieves the attendant somewhat and helps the patient to regain her strength through activity. When there is more than one bathroom in the house, it should be arranged for the patient to have a private bath, if possible. One cannot do this, of course, in the average home.

Care of the sickroom. — The attendant not only carries out the doctor's orders and gives the necessary nursing care but she is also responsible for the cleanliness and orderliness of her patient's room. The cleaning of the room should be

done quietly and systematically in order to avoid irritating the patient with dust, odors, and unnecessary noise.

The room is cleaned and dusted every morning. Carpets and large rugs are cleaned with the vacuum cleaner, if possible. If a broom must be used, various sweeping compounds, such as wet salt, wet sawdust, or bits of wet paper, may be used to keep down the dust. A wet cloth is sometimes tied over the broom or the broom itself may be dampened frequently. Small rugs are taken out of the room to be swept. Any ordinary floor may be wiped with soap and water. Oil mops are used on polished floors. Avoid using polish with heavy odors.

A damp cloth or an oiled cloth is best for dusting. Table covers should be changed as often as necessary to keep them looking fresh and clean.

It is an easy matter to keep a room clean and orderly if the routine cleaning is done every morning and every article is kept where it belongs. Be systematic and tidy in carrying out the day's work. Never leave soiled glasses, dirty dishes, empty medicine glasses, or unclean linen about the sickroom. Anyone can do a careless, haphazard piece of work. The trained person takes pride in keeping the patient's surroundings hygienic and attractive.

Cleaning the sickroom after communicable disease will be considered later.

REVIEW

1. What points should be considered in selecting a room for use as a temporary sickroom?
2. What kind of bed makes the most satisfactory sickbed? Why?
3. Why are light and sunshine essential to the sickroom?

4. What four things are to be considered in ventilating a room?
5. Describe several ways of protecting a patient from drafts.
6. What is usually the desired temperature for a sickroom?

SUGGESTED ACTIVITIES

1. Start a class scrapbook to which you can add material throughout the year. (A loose-leaf book is most convenient.) Let your first pages illustrate: (a) a bedroom which is suitable to use as a sickroom, (b) various appliances to use in ventilating the room.
2. If your classroom has the equipment, arrange a sickroom.
3. Arrange a bedside table for the convenience of the patient.
4. Write a description of the room in your house which you think would be best to use for a sickroom.
5. Draw a floor plan of the room.
6. Work out a good plan for keeping your classroom and its equipment clean.

CHAPTER III

BED-MAKING

Bed-making, if properly done, contributes definitely to the patient's comfort. Anyone can spread up a bed so that it looks reasonably well, but it is quite another matter to make a bed firmly so that it is really smooth and comfortable. To make a bed well requires a great deal of practice before one can do everything correctly without unnecessary motion. All methods of making a bed in the home, whether for the sick or well, involve a few simple fundamental principles. The first consideration is to secure comfort for the patient and to eliminate all causes of friction, irritation, or pressure upon the skin. The bottom sheets are arranged firmly so that they are free from wrinkles, and the top covers are kept neat in appearance without being uncomfortably tight or heavy. Can you make a bed quickly and properly?

You must have proper equipment for making the bed or enough ingenuity to find satisfactory substitutes. Let us consider what are the essential things and how they can be bought to the best advantage.

The mattress. — It is a point of economy as well as of comfort to buy a good mattress, if one can possibly afford it. A cheap, poorly made mattress soon flattens out or becomes lumpy so that it has to be discarded. A good mattress costs more, but it lasts a long time and can be cleaned or made over whenever necessary. A good bed actually contributes to

the health and comfort of a well person because it helps to give complete relaxation during hours of sleep. When a member of the family is ill, a comfortable bed is doubly appreciated.

Good daily care will help to keep any mattress in good condition. To keep it clean, use a slip cover of unbleached muslin, fastened at one end with ties or snaps. This can be removed and washed as often as necessary. A quilted pad may be spread over the top of the mattress to protect it from stains. A discarded cotton blanket is often used for this purpose.

A mattress in ordinary use should have frequent airing and occasional sunning. If it cannot be taken out of doors on an open piazza, it may be placed on two chairs near the open windows. The seams and tufts of the mattress should be brushed frequently with a whisk broom. At house-cleaning time the mattress should be cleaned thoroughly with the carpet beater or the vacuum cleaner. The daily turning of the mattress from end to end is perhaps the most important single factor in retaining smoothness and shape.

In the sickroom the mattress needs additional protection. A piece of rubber sheeting or oilcloth about a yard wide and long enough to tuck under both sides may be placed across the bed to keep the mattress from getting wet or soiled. If the rubber sheeting is only long enough to reach across the bed, a piece of muslin may be sewed on each end to tuck under the mattress. The rubber may be pinned to the mattress if necessary. Rubber is often uncomfortably hot in the summer, and a quilted pad placed over it helps to keep the patient cool. In many cases, a quilted pad across the bed is enough. One substitute for rubber sheeting is a newspaper

pad made of ten or twelve papers opened to full size, sewed together, and covered with freshly laundered old muslin. Cotton batting may be used between paper or muslin to make a pad.

Pillows. — A variety of pillows are needed in the sickroom. Both feather and hair pillows can be used to advantage. Small, medium-sized, or extremely large pillows may each serve a particular need in making the patient comfortable. When buying pillows, one should choose a standard size made of high-grade, closely woven ticking.

Pillows, like mattresses, need to be brushed, sunned, and aired frequently. They may also be cleaned with the vacuum cleaner. When badly soiled they should be renovated by a cleaner. Pillows which are used on the sickbed may be temporarily protected by rubber pillowslips whenever necessary. Rubber sheeting or oilcloth may be wrapped around the pillow as a substitute.

Pillowcases. — When buying pillowcases, choose a size several inches longer than your pillow and wide enough to slip on easily. It is better to have them too large than too small. A case which is too small is hard to put on and it packs the pillow too tightly. If the pillowcase is too large, a pleat can be folded along one side to make it fit the pillow. Never hold a pillow in the mouth while adjusting the pillowcase. Cotton pillowslips of various grades are generally used in the sickroom.

Sheets. — The wise housewife buys sheets at least a yard longer and a yard wider than the bed. A bottom sheet cannot be tucked in tightly and kept free from wrinkles unless it is large enough. Even the everyday bed cannot be made properly without long sheets. Do you know what length of

sheets you should buy for your bed? Large sheets, though they cost a little more, are economical, because all sheets wear first along the hem, and if they are long enough, they can be rehemmed without becoming too short. Buying them a yard wider and a yard longer than the bed also makes allowance for shrinkage. Cotton sheets of any grade are satisfactory for the sickroom.

The draw sheet. — When rubber sheeting or oilcloth is used across the bed to protect the mattress, it must be covered with a sheet. This is spoken of as the draw sheet. In hospitals, the draw sheet is slightly wider than the rubber sheeting. In the home, an ordinary sheet folded in half or a large crib sheet may be used.

Blankets. — The best type of blanket to buy is one of all-wool or one having equal parts of wool and cotton. The all-wool is both light and warm and therefore makes the more comfortable cover. They are especially desirable for the sickbed. Double blankets should be cut in two and the edges hemmed or bound because single blankets are more easily handled and are more convenient for adjusting the weight of the covers. Light blankets of cotton or flannel are useful in the summer time. Blankets should be sent to the cleaner or washed carefully at home whenever necessary.

Comforters, quilts, and puffs. — Eider-down quilts and wool puffs are warm and light. They are ideal as extra covers to be used at night when the room is cold or when the patient is sleeping out of doors. Heavy quilts or cotton comforters are commonly used but they are heavy and, for that reason, are not as suitable for the sickroom. If they have to be used, protect the patient from the weight of them by using the bed cradle (see Chapter IV).

Blankets and quilts may be protected from contact with the face and neck by basting on both sides of the top a wide piece of linen, muslin, or dimity, or a double thickness of cheesecloth.

Bedspreads. — Plain white, washable bedspreads are the most desirable for general use. They should be large enough to cover the bedding and springs at the sides and foot, and should reach to the head of the bed. In the sickroom, a large sheet makes a good spread. Light-colored washable spreads are not objectionable, but silk spreads are not practical to use during illness. Combinations of rayon and cotton bedspreads are commonly sold. If they are light in weight, they may be used in the sickroom.

In the everyday care of a bed, spreads which are heavy, fancy, or valuable should be removed at bedtime. Some persons keep a plain linen, muslin, or silk cover over the blankets for protection at night when the spread is removed.

In the home, you may sometimes be obliged to make a sickbed without the ideal equipment. Keep in mind that the top covers should be warm and light, and the bottom sheets tight and smooth. Do the best you can with the materials you have. It is simpler to learn first how to make the bed when it is unoccupied. Later you will learn to make the bed with a patient in it.

Stripping the bed. — The process of removing all the bedclothes is spoken of as stripping the bed. This is always done preparatory to making the bed for a person who is ill (if the patient is able to sit up while the bed is being made). It is difficult to remake a bed tight and smooth unless all the covers are removed at the start. At the foot of the bed we place two straight chairs with backs together to hold the bed-

clothes. We remove the pillows and stand them up endwise against the backs of the chairs, placing one on each chair with the closed end of the pillowcase at the top.

In most homes a clean spread is not available more than once or twice a week and for this reason it must be taken off carefully so that it will not be rumpled. Carry the top end down to the lower end of the mattress, thus folding the spread smoothly in half. Fold it over again from the center of the bed. Loosen the spread from under the foot of the mattress at the corner nearest you. At the same time, loosen all the other top bedclothes at that corner before walking around to the other side, thus saving yourself an extra trip around the end of the bed. Then loosen the spread at the opposite corner and turn back the whole lower end of the spread over the part already folded. Taking hold of the folded spread in the center, double it together and place it smoothly over the pillows on the chairs.

Loosen the rest of the top covers and you are now ready to remove the blankets one at a time. Each blanket is gathered loosely from side to side and held lengthwise in the hands as it is placed over the spread. The top sheet is removed in the same manner. Now pull out all the bottom bedclothes both at the foot and head on one side. Then go to the other side and do the same thing. The draw sheet and rubber sheeting or pad are folded in halves and then quarters and placed over the chairs. The bottom sheet is taken off in the same manner as the blankets and upper sheet.

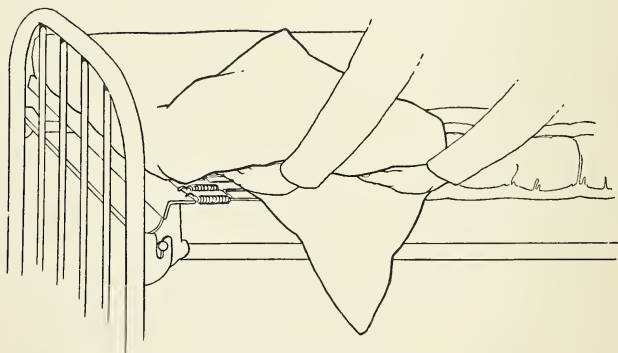
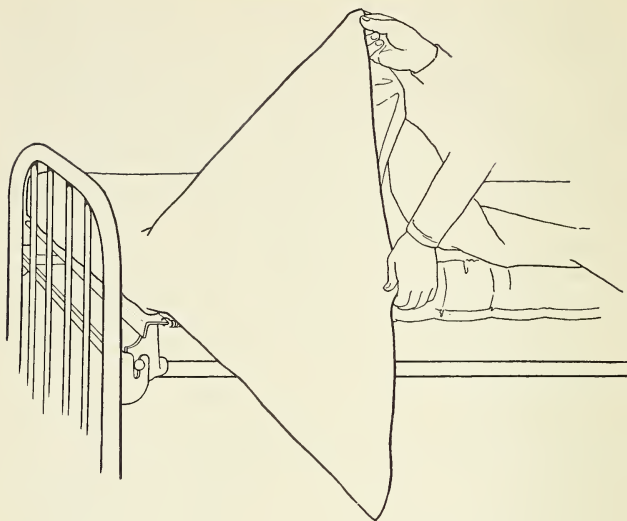
The mattress should be turned every day to keep it from getting lumpy. It must be turned from end to end to prevent the weight of the body from falling constantly in one place and making deep uncomfortable hollows where the patient lies.

The closed bed. — You are already familiar with the closed bed although the term may be new to you. When the bed is not occupied during the day, we tuck the top sheet and blankets completely under on both sides, put the pillows in place, and arrange the spread to suit individual taste. This is called the closed bed. Whenever a patient is to be up and dressed for the greater part of the day, we close the bed because it makes the room look neater.

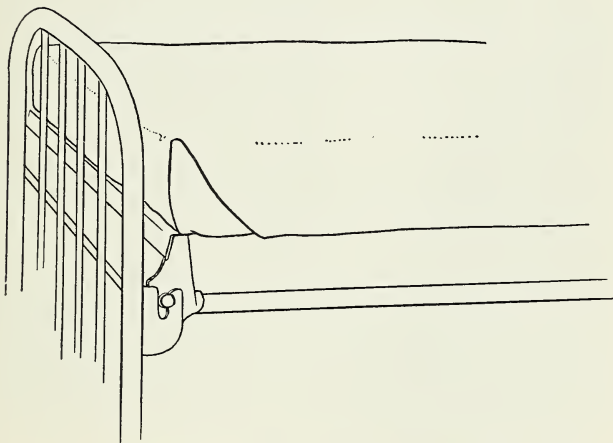
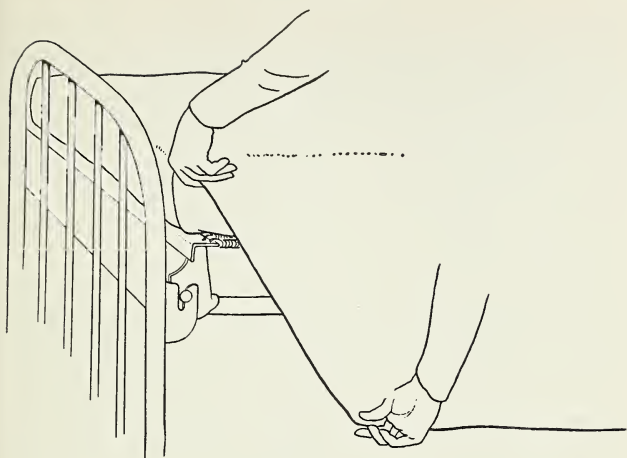
In the sickroom, however, we are more particularly concerned with the open bed, which has the top covers tucked under at the bottom but left loose, or open, at the top and sides. The principles involved in making the closed bed and the open bed are the same.

The open bed. — Having turned the mattress, arrange the quilted pad over it. Take the bottom sheet from the chair and spread it over the bed with the wide hem at the top. Allow eight, ten, or twelve inches (depending on the length of the sheet) to tuck in at the top. Measure crosswise to find the middle of the sheet and place it at the middle of the bed. Smooth the sheet over the upper half of the bed and adjust it at the corner by making either an envelope corner or a square corner. Either of these will hold the sheet firmly in place and keep it from wrinkling.

An envelope corner is made this way: Stand at the corner, facing the head of the bed. With the hand next to the bed raise the corner of the mattress a little so that you can fold the top of the sheet under the end of the mattress, being sure to have the sheet smooth and perfectly straight. Now, with the hand nearest the bed take hold of the edge of the sheet where it hangs over the side about twelve or fourteen inches from the head, and lift it over the bed toward the opposite side in a straight line until the fold between your hand and the



FIRST AND SECOND STEPS IN MAKING
ENVELOPE CORNERS



THIRD AND FOURTH STEPS IN MAKING
ENVELOPE CORNERS

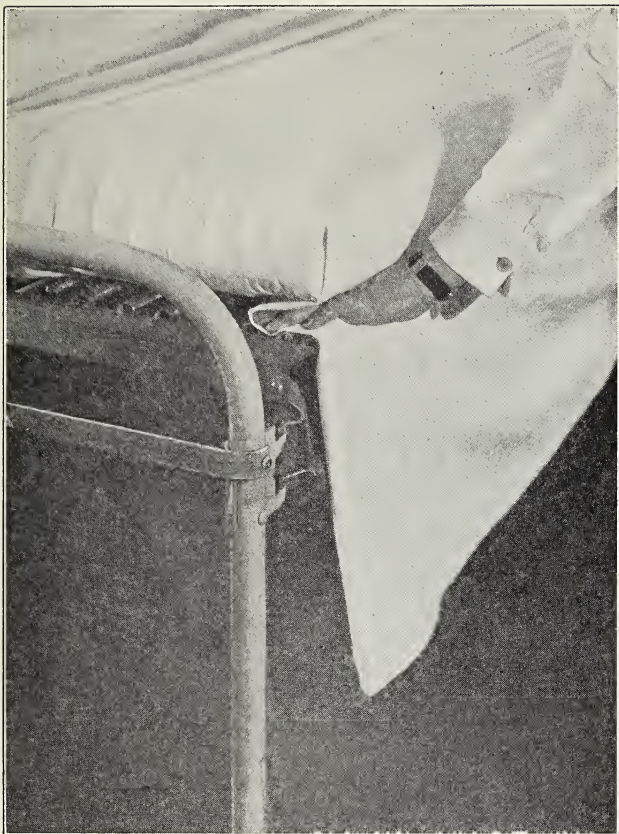
head of the bed has the shape of a big triangle. Then with your other hand tuck the lower part of this triangle under the mattress and, dropping the upper part down over the side, tuck it all under smoothly. This makes the envelope corner.

The square corner is made in the same way, except that after tucking in the lower part of the triangle, you pull the edge of the fold toward the head of the bed until it makes a straight line at the edge of the corner. Then tuck under the rest of the sheet.

The corner at the lower end of the bed is made in the same way. Then the sheet is tucked in all along the side until the edges are perfectly straight under the mattress. On the opposite side, the corner at the foot is made first and then the one at the head. Along this side the sheet must be pulled tightly and firmly so that the surface of the bed is entirely smooth and free from wrinkles. If you are obliged to use a sheet which is not long enough to tuck in firmly at both head and foot, it is more important to tuck it in well at the top because there is a tendency for the sheet to be pulled downward.

The rubber sheet and draw sheet go on next. Lay the rubber sheet across the middle of the bed so that it reaches from the position of the patient's shoulders to her knees. Place the draw sheet over this and tuck both under together. Going around to the opposite side, pull the rubber sheet and draw sheet as tight as possible and tuck them under separately. When substituting a large sheet folded in half for a draw sheet, place the folded edge toward the head of the bed. This keeps the two parts from separating when the patient moves about or slides down.

The upper sheet is then placed on the bed wrong side up



COMPLETING THE SQUARE CORNER

with the wide hem at the head. Measure crosswise for the middle of the sheet and place the upper edge of the sheet exactly at the edge of the mattress. Straighten out the whole sheet and make the two lower corners, as you did for the lower sheet.

In placing the blankets, put the top of each blanket about ten inches from the top of the bed so that it will come below the patient's head. Have the middle of the blanket in the middle of the bed, and make the corners properly at the foot.

Opening the spread, lay it across the foot of the bed so that the fold which tucks under the foot of the mattress is on top. Turn this edge back and, reaching across the bed, take hold of both sides of the top of the spread and carry it to the head of the bed. If the spread was taken off correctly, it is now smooth and in position to tuck under at the foot. If you have a single enameled bed, the sides of the spread are not tucked in but left hanging, after the square corners are made. With solid wooden beds the appearance is often neater with the spread tucked under on the sides.

Blankets are not so easily laundered as sheets and spreads. In order to keep them clean and prevent their coming into direct contact with the patient, the upper edge of the spread is folded under the blankets and then the top sheet is folded back over the spread. Since the sheet was put on wrong side up, the right side of the hem will show when the top is turned down. This folding over at the top gives a double protection to the blankets and the eight- or ten-inch fold of the sheet gives a neat, finished look to the open bed. When the patient is sitting up in bed or wants her arms out from under the covers, the top bedclothes may be turned back once or twice the width of this fold.

Arrange the pillows, turn back the top covers on one side, and the bed is ready for the patient.

REVIEW

1. Why is it important to make a bed properly?
2. What general rule should one follow in buying sheets?
3. What points should one consider in buying blankets or other top covers?
4. How can a mattress be kept in good condition?
5. Describe three ways of protecting a mattress from being soiled and stained.
6. Describe two methods of protecting blankets.
7. What type of bedspread is most desirable for general use? Why?

SUGGESTED ACTIVITIES

1. Add a page or two to your scrapbook showing the various articles of bed equipment.
2. Compare the cost of all-wool puffs and cotton comforters; of cotton blankets and woolen blankets.
3. Measure the length and width of your own bed to see what length sheets you should buy.
4. Strip a bed.
5. Practice making envelope and square corners.
6. Make an open bed; make a closed bed.
7. Make your own bed properly every day so that you will become skillful in making a bed quickly and well.

CHAPTER IV

MAKING A PATIENT COMFORTABLE IN BED

Were you ever sick in bed?

Did you find it restful to change your position often?

Did the weight of the bedclothes tire your feet and legs?

Have you ever used a back rest?

Most of us find it very trying to stay in bed for any length of time. A patient is always grateful to an attendant who is able to make her comfortable. If you know how to handle, move, and arrange a patient in a satisfactory way, you can often transform a complaining one into a contented one. Fatigue, muscle tension, and pressure must be relieved in order to bring about the desired relaxation.

The attendant should be sympathetic and make the patient feel that no discomfort is too trivial to receive attention. On the other hand, one must guard against being too solicitous. Some patients are actually annoyed by a person who constantly offers superfluous attention. Others, however, are unusually self-centered because of their illness and want to be pampered — a state of mind which should not be encouraged. The attendant should try to find the middle ground between these two extremes.

The skillful attendant anticipates the patient's needs and knows what to do to make her comfortable before the patient herself has thought of it. As a matter of fact, few sick persons know how their discomfort can be relieved; they know only that they are miserable.

Adjusting pillows. — The number and arrangement of pillows to be used vary with different patients. One person may prefer only one pillow, while another may want two. Encourage the patient to use only one pillow when sleeping, unless otherwise ordered by the physician. For many persons, sleeping without a pillow gives the greatest relaxation.

When placing pillows under the head, bring the under one somewhat forward to give support to the shoulders. Make a practice of removing the pillows occasionally, shaking them, and turning them over as you rearrange them. When the weather is warm or the patient is hot with fever, this should be done often.

By using several pillows the patient can be supported in a slanting position. The degree of this incline depends upon the number of pillows. An odd number of pillows are easier to arrange — either three, five, or seven. Place the first one near the head of the bed, and bring the second forward to support the shoulders. The third overlaps the second, raising the head and supporting it. Any odd number of pillows may be built up in this manner. With each change of the patient's position, the pillows must be rearranged.

It is easier to turn the patient's pillows when standing at the right side of the bed. The patient is supported with the left hand and arm so that the right hand is free. One of the simplest ways to lift the patient's head and shoulders while adjusting pillows is to have her place her arms around your body just below your arms. Lifting her gently, let her hold herself while you rearrange the pillows. Another method is to place your left hand under the patient's shoulders, supporting her head in the hollow of your arm. Lifting the patient slightly, remove one pillow at a time by drawing it

out from the right side. Put the patient's head down, shake the pillows, place them within reach, and, again lifting the patient, rearrange them.

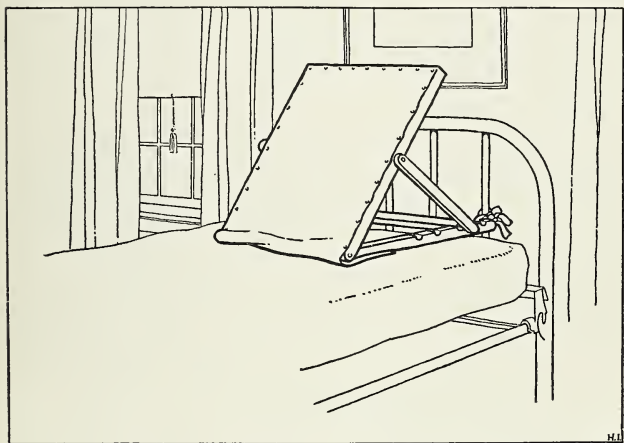


THE PATIENT SUPPORTS HERSELF WHILE PILLOWS
ARE BEING ADJUSTED

Turning the patient on her side. — When you turn on your side you do not lie in a perfectly straight line. You naturally bend your knees so that you lie with your hips well back in the bed and your shoulders and knees nearer the edge of the bed. If the patient starts to assume this position

while she is still on her back, she can help in moving her hips, the heaviest part of the body.

It is usually easier to turn a patient toward you than away from you. Unless the patient is extremely weak she can always help in the lifting and moving of her body. If she is lying on her back and you want to turn her on her side, remove all the pillows except one. Then, placing your hands on either



A SIMPLE BACK REST TIED IN POSITION

side of her hips, ask her to draw up her knees, lift her hips, and move them slightly farther over in the bed, away from you. Ask her to place her arms around your back, as already described, and move her shoulders over toward you. This puts her into a position from which she can roll over on her side facing you. If necessary, you can help her turn by taking hold on either side of her hips and turning them toward you.

If the patient is heavy and rather weak, it may be difficult to turn the hips. In such a case, place a large towel or pad under the hips and, as the patient turns her shoulders away from you, pull the pad toward you. This helps to roll the patient over on her side.

After the patient is comfortably turned, place a pillow lengthwise at her back. Pushing it in close, fold it back on itself lengthwise and roll it under; thus, as the patient leans against it her back is well supported. Another pillow may be placed under the head; a small one is usually more comfortable.

The patient usually bends her knees when lying on her side. To lessen muscular strain and keep the surfaces of the legs from rubbing together, place a small pillow between the knees. Sometimes greater comfort may be secured by using a larger pillow there, so arranged that it gives complete support to the lower half of the leg.

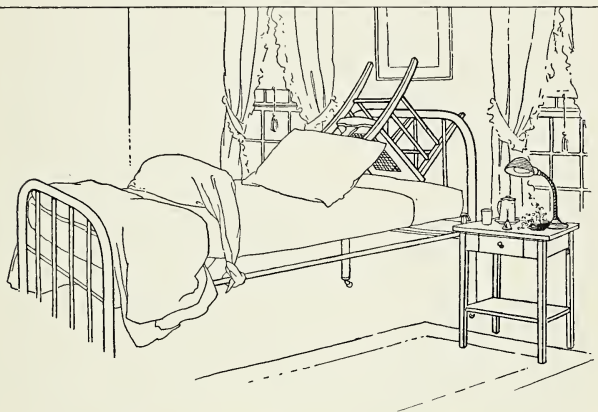
The back rest and knee pillow. — A back rest is used to support a patient who can sit up in bed. One can be bought at a surgical supply store for a reasonable price or various substitutes can be improvised in the home. A chair makes a fairly comfortable back rest when it is turned bottom side up so that the back forms an inclined plane, or a flat suit case may be used to support the patient in a slanting position.

Any back rest should be tied firmly in place when used in an open iron bed. The wooden bed should be protected from scratches by placing a blanket or quilt over the headboard.

When placing the pillows on a back rest, arrange the first one so that it will come down to the end of the patient's spine. Each additional pillow slightly overlaps the one underneath. Make the slant gradual so that the patient's head will be

thrown neither too far forward nor too far back. Small pillows can be used to great advantage when propping a patient up in bed.

There is a tendency to slide downward when sitting against a back rest. This can be controlled somewhat by use of the

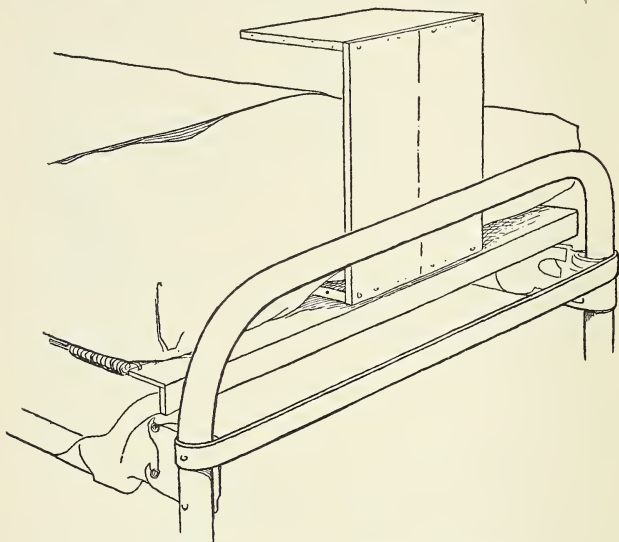


CHAIR USED AS BACK REST. KNEE PILLOW
TIED IN POSITION

knee pillow. Such a pillow is round and hard so that it gives good support as the knees rest upon it. One cannot sit comfortably with the legs extended, neither can a person who is ill hold the knees in a flexed position without support. Consequently, a knee pillow is always used when a patient is sitting up against a back rest.

The average home does not have a regular knee pillow, but a large hair pillow or even a firm feather pillow can be used as a substitute. Spread a sheet out flat and place the

pillow diagonally across one corner. Roll the pillow in the sheet from corner to corner. Place the rolled pillow under the patient's knees and tie each long end of the sheet to the side of the bed. A pillow can often be used satisfactorily by



A BOX USED AS A BED CRADLE

simply doubling it over on itself and sliding it under the knees. An old-fashioned bolster makes a good knee pillow.

The patient often needs a scarf or shawl over her shoulders when sitting up in bed. A bed jacket or a lightweight bathrobe should be put on to prevent chilling.

The bed cradle. — When a patient is weak, the weight of the bedclothes sometimes irritates the skin and increases the

muscle tension, especially in the feet and legs. A bed cradle is a simple appliance which raises the bedclothes slightly from the patient's body. It is commonly used at the foot of the bed to relieve the feet and legs, but it may be used over the abdomen or arms. There are many sizes and types of bed cradles. The simplest kind is very much like the framework of a stool which has no top. Two legs are placed under the mattress and the other two extend over the bed to support the top bedclothes. A child's doll table or a small footstool makes a good substitute. A small wooden box may be used if the two ends are knocked out and one side is placed under the mattress and the other extends over the bed to support the bedclothes. Another kind of bed cradle is made of semi-circular pieces of wood or iron fastened together so that they will stand up on the bed. Many possibilities will suggest themselves to the ingenious person.

The bedclothes should not be raised too high above the body because too large an airy space may make the patient feel chilly. When using a bed cradle during very cold weather, a hot-water bottle in the foot of the bed or a small flannel blanket over the feet and legs will help to avoid chilling.

Moving a patient from one bed to another. — It is always restful if the patient can be moved into another bed or onto a cot while the mattress is being aired, sunned, and turned, and the bed freshly made. This is occasionally done for the home patient who has been in bed for a long period of time. It should be done often for the chronic patient or for the aged person who has to stay in bed.

Three persons are needed to move a helpless patient safely and comfortably. First, cover the patient with a blanket. Place the second bed (or a cot) at right angles to the first with

its head toward the foot of the patient's bed. With all three persons standing on the same side of the bed, the first person slips her arms under the patient's head and shoulders, the second takes the hips, and the third carries the feet and legs. As one gives the command to lift, all three lift together. After the patient has been carried to the side of the other bed, a signal is given and all three persons bend forward at the same time and gently place the patient on the clean bed. Later in the day she may be lifted back to her own bed in the same manner.

It is not always necessary to move the cot or fresh bed at right angles to the patient's bed. If it is preferred, the patient may be lifted in the manner described and carried across the room to the cot or bed. At times it may even be possible to carry her into another room for the day. Any change is appreciated and enjoyed.

REVIEW

1. How can a complaining patient often be transformed into a contented one?
2. What is the proper attitude for an attendant to take in regard to the discomfort of her patients?
3. How are fatigue and muscle tension relieved?
4. Should it be necessary for the patient to speak of her needs?
How can the attendant prevent this?
5. How often should a patient's pillows be turned and rearranged?
6. Describe the method you would use in helping a heavy or weak patient to turn her hips.
7. Where would you place pillows to give support and to relieve friction when a patient is lying on her side?

8. What is a back rest and how is it used? What substitutes can be improvised?
9. Why is a knee pillow always used with a back rest?
10. Describe the methods of applying a knee pillow.
11. How may a patient be protected from chilling while sitting up in bed?
12. What is a bed cradle? Why is it used?
13. Describe several types of bed cradles. Name several substitutes.
14. How can you prevent chilling when using a bed cradle?
15. Why is it desirable to move a bed patient into another bed or cot?
16. Describe the best method of moving a patient from one bed to another.

SUGGESTED ACTIVITIES

1. Add several pages to your scrapbook to show the various sickroom appliances and their uses.
2. Practice handling and adjusting pillows.
3. Practice moving the 'doll' (see Appendix, p. 268) in bed.
If your classroom does not have a life-size doll for demonstration purposes, you can practice moving each other.
4. Practice turning the doll on her side.
5. Demonstrate how to make a patient comfortable on a back rest.
6. Let two or three students volunteer to bring in homemade bed cradles for your classroom.
7. Make the bed with a bed cradle in it.
8. Divide the class into groups and practice lifting a patient.

CHAPTER V

CLEANLINESS AND CARE OF THE SKIN

The bed bath. — A bath always makes one feel better. It is especially stimulating and refreshing to a patient. It equalizes the circulation in the skin, affords a certain amount of exercise, and lessens the fatigue of lying in bed. Every patient, unless the doctor has ordered otherwise, should have a cleansing bath every morning. If unable to take a tub bath, she must have a bath in bed. Such a bath is spoken of as a bed bath.

To give a bed bath effectively without irritating or tiring the patient requires practice and skill. It should be given systematically according to the same general plan each day. Slight variations in the routine of the bath may be made if the patient wishes. Her peculiarities and personal habits must be considered in order to avoid annoying her.

Collect everything needed for the bath before disturbing the patient. Having once begun, go through without interruption. Here is a list of articles needed for the bed bath:

Curved basin (or substitute)
Clean bed linen
Face towel and bath towel
Face cloth and bath cloth
Bath blanket
Clean nightgown
Rubbing alcohol
Soap

Talcum powder
Toothbrush, paste, and glass
Face basin
Foot tub or large basin
A small piece of rubber sheeting or oilcloth
Protective covering for table or chair (newspaper or heavy towel)



A ROOM SET UP FOR A BED BATH

First, bring the clean linen and the bath blanket. A soft, old blanket which has been washed may be used to cover the patient during the bath. Place the linen over the head of the bed or somewhere within easy reach. Close the windows

and, in cold weather, be sure that the temperature of the room is between 68° and 70° F. Place two chairs at the foot of the bed and remove the top covers, covering the patient with the bath blanket before removing the sheet. One pillow is usually left under the patient's head. Now bring from the bathroom the face basin, curved basin, a glass of luke-



A CURVED BASIN

warm water, toothbrush, soap, face towel, face cloth, and rubber sheeting.

The rubber sheeting is used to protect the bed. (Two bath towels may be substituted.) Put it under the towel which is placed beneath the patient's head. By raising herself on one elbow, the patient can usually brush her own teeth and usually prefers to do so. The attendant may have to brush the teeth for the patient who is very ill or extremely weak. When the brushing has been done, give the patient small amounts of warm water from the glass, holding the curved basin so that she can rinse out her mouth. (If there is no curved basin in the home, use some small dish as a substitute and sterilize it by boiling when the patient no longer needs it.)

The next step is to remove the patient's gown by bringing it up over the hips and shoulders and sliding it off over the head. Have the patient lie on her back with her knees bent. Ask her to raise her hips and, as she does so, slide the gown up above the waist. Now lift her shoulders and draw the gown up to her neck. Slip one of her arms out of its sleeve, draw the gown over the head, and off the other arm. The patient is now ready for the bath.

Wrap the face cloth around your hand and, dipping it into the clear, warm water, wash the patient's eyes. Then, soaping the cloth, wash the face, neck, and ears. Go over each area twice. Use a soapy cloth first and then wipe again after you have rinsed the cloth. With the ends of the towel dry the patient's eyes, face, neck, and ears.

When washing and drying the patient, use a firm, smooth stroke. It gives one an uncomfortable, clammy sensation to be wiped lightly with a damp cloth. Have the cloth thoroughly wet and soapy, and rub firmly but smoothly all over the skin. At all times during the bath, be careful to expose only that part of the body which is being washed.

Place the rubber sheeting and towel under the arm farthest from you and, beginning with the hand, wash the outside of the arm, then the inside, paying particular attention to the arm pit. Dry the arm thoroughly, move the rubber sheeting and towel to the arm nearest you, and wash it in the same way.

The face basin, towel, and cloth are now exchanged for the bath basin, bath towel, and bath cloth. A foot tub is the best kind of bath basin. If one is not available, use a large enameled dishpan, keeping it for this purpose only. When the patient is well again, it may be boiled before being returned to general use.

Fill the foot tub about two-thirds full of warm water. Fold the bath towel over the patient's chest. Raising the towel a little, wash and dry the chest. Leave the towel on the chest and, folding the blanket back, wash and dry the abdomen and hips. The chest and abdomen may be washed and dried while holding the blanket up and working under it. It is more satisfactory, however, to use the method first described, as it enables the attendant to notice the condition of the skin.

The back is washed next. Ask the patient to turn on her side facing you. Place the bath towel over the rubber sheeting and tuck both under the patient's back to protect the bed. With the wash cloth quite wet and soaped, wash the patient's back and buttocks. After thoroughly drying the back, take some rubbing alcohol in the palm of your hand and rub it gently over the neck and shoulders. Put a little more alcohol in your hand before rubbing the lower half of the back, being careful to rub well over the end of the spine. Take special care that the alcohol does not run into the crease between the buttocks. Rub gently until the alcohol evaporates; then shake some talcum powder on the back. After this, give your patient a back rub. Beginning at the lower end of the spine and using a firm, smooth, rotary movement, massage first up one side of the spine and then up the other. This can be continued for five minutes or more. The back rub is completed with three or four firm strokes down the spine itself, from the base of the head to the very end of the spine.

Now, remove the towel and rubber sheeting and have the patient turn on her back. The legs are washed next. Protecting the bed in the usual way, wash and dry the upper part of the leg farthest from you. Then move down the rubber

sheeting and towel, and place the foot tub in the bed so that the patient can put her foot in it while the lower leg and foot are washed. Every patient enjoys this part of the bath. Actually putting the feet into the water makes one feel much more clean and comfortable. Remove the tub, and rub the leg dry. The other leg is washed and dried in the same way. Let the patient finish her bath.

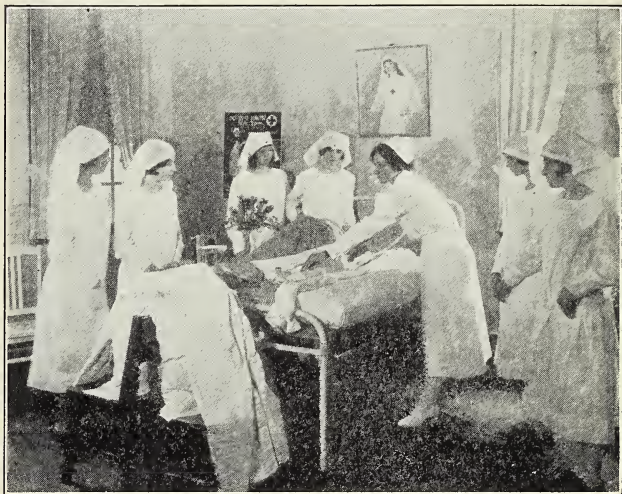
The foot tub, soap, and towels are now carried to the bathroom. Empty the basins and leave them to be cleaned later. Wash your hands before returning to the sickroom, and then comb the patient's hair and put on a fresh nightgown, which in cold weather the attendant may wish to warm on a radiator or before a heater.

The bathroom is the logical place for the patient's bath articles. During illness it is convenient to keep an old table in the bathroom to hold these things. There should also be a separate towel rack for the patient.

After finishing the morning work in the patient's room, the attendant gives her attention to the cleaning of the bath articles in the bathroom. Wash the basins with soap and water, dry them, and put them in their places on the table. Put out clean towels and face cloths, if needed.

Making the bed with the patient in it. — Sometimes it is necessary to make the bed with the patient in it. This is usually done as soon as the patient has had her bath. To change the bottom sheet and draw sheet, remove the pillows and move the patient to one side of the bed. Ask her to turn on her side with her back toward you. Pull out the ends of the draw sheet and the rubber sheet. Loosen the ends of the bottom sheet on your side of the bed. Pleat (or fold) each of these separately and place them close against the pa-

tient's back. Take the clean sheet and, pleating half of it lengthwise, place the pleated portion under the edge of the soiled sheets as near to the patient as possible. Make the two corners as usual, tucking the sheet under smoothly. Un-



MAKING A BED WITH THE PATIENT IN IT

fold the rubber sheet and, placing the pleated half of a clean draw sheet against the patient, smooth out the part nearest you so that both the rubber sheet and draw sheet can be tucked under the mattress on that side. The patient now rolls over to the clean side of the bed and the attendant goes to the opposite side, where she loosens the ends of the bedclothes and removes the soiled sheets. Pleating the rubber sheet against the patient, the attendant smooths out the clean sheet, pulls it

tightly to make the corners and tucks it under along the side. Then the rubber sheet and draw sheet are pulled out tight and smooth, and tucked under separately.

In putting on a clean pillowcase, lay the pillow across the chairs or on the foot of the bed and pull the case up over it. Reach your hand in to make sure that the corner of the pillow fits into the corner of the case. Never hold the pillow in the mouth or under the chin.

Arrange the pillows under the patient's head. Finish making the bed in the usual way and then remove the bath blanket.

When you are changing the bed, put a soiled pillowcase on the chair to hold the soiled linen as you take it from the bed. After the bed making is finished, pick up the case of soiled linen, place the two chairs where they belong, and the room is orderly once more, ready to be swept and dusted. If there are flowers in the room, cut their stems and rearrange them in fresh water.

The tub bath. — As the patient gets stronger and is up and about the room, the doctor may allow her to take a tub bath every morning. Prepare the bathroom and have everything ready that is needed by the patient — towels, toilet articles, and necessary clothing. Place a bath mat beside the tub and spread the bath blanket or a large bath towel over a chair or stool for the patient to sit on. Draw the water at a comfortable temperature. If you have a bath thermometer, test the water; 96° F. is usually satisfactory. The room temperature should not be much over 68° F. When everything is ready, help the patient into her bathrobe and slippers and assist her to the bathroom. Watch her carefully and help with the bath as much as possible. If she is rather weak,

or if it is her first tub bath since her illness, do not leave her in the bathroom alone — she might faint or fall. If the patient is able to get along without your help, you may make her bed at this time.

Pressure sores. — The daily care of the patient's skin not only lessens bed-weariness but it is also an important factor in preventing the development of pressure sores, commonly called bedsores. Continuous pressure upon the weight-bearing areas of the body interferes with the circulation in those places. The vitality of the tissues is already below normal because of the patient's illness. Under constant pressure, therefore, the tissue tends to lose its tone and become weak. Finally sores develop.

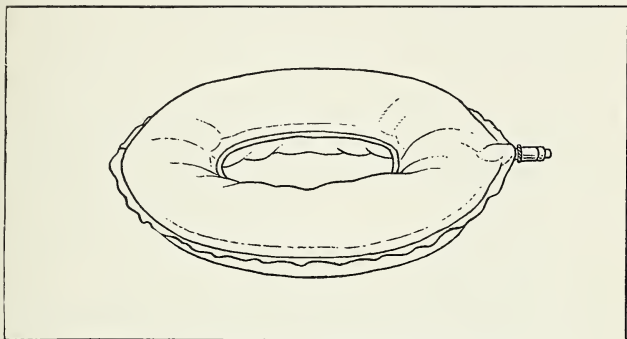
Bedsores occur most often over the bony prominences which bear most of the weight when one is in bed. The places to be watched are the lower end of the spine, the elbows, the shoulders, the hips, and the heels. Pressure sores are most likely to appear on thin or aged patients. The first sign is redness of the skin, followed later by a bruised appearance.

Pressure sores can nearly always be prevented by good nursing care. Small pillows and cotton pads can be used to relieve pressure between the knees, between the ankles, and under the shoulder blades. Small cotton rings are useful for the heels and elbows. They are easily made by winding strips of muslin or gauze around a small roll of cotton batting or absorbent cotton. These may be held in place with tapes. If carefully made, they give good protection.

The most satisfactory way of relieving pressure at the end of the spine is by the use of the rubber air ring. After inflating it a little, put it into a pillow case and slide it under the patient so that the end of the spine is free from the weight of

the body. If the ring is blown up too much it is hard and uncomfortable.

There are three things to consider in the prevention of pressure sores: (1) the relief of pressure, (2) the care of the



A RUBBER RING INFLATED FOR USE

patient's skin, and (3) the care of the bed. Each is as important as the others. Preventive treatment consists of:

- (1) The relief of pressure by
 - a. Turning the patient frequently
 - b. Using pillows, rubber air rings, and cotton rings
- (2) Care of the patient's skin by
 - a. Giving the daily bath
 - b. Keeping the skin clean and dry
 - c. Rubbing with alcohol
 - d. Massaging daily
- (3) Care of the bed by
 - a. Keeping it clean and dry
 - b. Keeping the bottom sheets smooth and free from wrinkles and crumbs

In spite of all one can do, occasionally a patient will develop a bedsore. Report unusual redness at once to the physician in charge and he will prescribe treatment. It is usually treated as a surgical wound and special care must be taken to protect it from pressure while it heals.

REVIEW

1. What are the benefits derived from a bath?
2. Why should one be systematic in the bath routine?
3. Name the articles needed for the bed bath.
4. How may the bed be protected from getting wet during the bed bath?
5. What should one do with the soiled linen as it is removed from the bed?
6. What causes a pressure sore?
7. What three things should be considered in preventing pressure sores?
8. Describe the various methods of relieving pressure.
9. Tell what things should be done in caring for the skin.
10. What things can you do in caring for the bed to prevent pressure sores?

SUGGESTED ACTIVITIES

1. Add to your scrapbook any illustrations which are suggested by this chapter. Snapshots might be taken of the various activities.
2. Practice setting up your classroom for a bed bath.
3. Demonstrate how to prepare a patient for a bath in bed.
4. Give the doll a bed bath.
5. Change the bed linen with the doll in bed.
6. Make cotton rings for the heel or elbow.
7. Practice back rubbing on some member of your family.

CHAPTER VI

SYMPTOMS OF ILLNESS

Can you tell anything about a person's health by his general appearance?

Do you know some of the signs of health?

What are they?

Is illness expressed in one's appearance and behavior?

Why is it important for a home attendant to be able to recognize the general signs of illness?

Certain characteristics can be observed as definite signs of health, — clear skin, bright eyes, good color, firm muscles, alertness of mind and body, and normal interest in other persons. In addition to these things there are certain conditions within the body which can be detected by the physician as signs of health. Any evidences of change from the normal appearance, behavior, or condition are spoken of as *symptoms*, or signs of illness.

A symptom is not a disease. It is merely a sign that something is wrong. The part of the body where the symptom appears may not be the part which needs attention. For example, headache and general sluggishness accompanied by an inability to do good mental work may be symptoms of constipation. In such a case, the symptoms will disappear as soon as the constipation is corrected. Symptoms are nature's method of warning us that some part of the body is in trouble and needs attention.

When the physician is called, he interprets the meaning of

the various symptoms and tries to discover what is causing the trouble. This is called making a diagnosis. He then prescribes the proper treatment necessary to alleviate or cure the disease. As you can readily see, it is unwise and even dangerous for anyone except the physician to attempt a diagnosis or to prescribe treatment.

It is important, however, that someone in the home should be able to recognize certain general symptoms which indicate that it is necessary to send for the physician. It is also important for the sickroom attendant to learn what observations the doctor expects to have made and reported to him.

The doctor can call only once or twice a day for a few minutes. The nurse or home attendant, being with the patient constantly, has an opportunity to see how she eats and sleeps and reacts to treatments and medicines. The doctor, therefore, depends upon her for an accurate account of what the patient says and does. He wants to know what the attendant sees and hears, not what she thinks about the case. Her report of the patient should give him a clearer picture of the true condition and help him to reach a decision in regard to treatment.

Classification of symptoms. — In home nursing we are concerned with two kinds of general symptoms — the objective and the subjective. Symptoms such as pain, nausea, or fatigue, which are apparent only to the person affected, are called *subjective* symptoms. The word subjective indicates that the patient herself is the subject of her own sensations, which can be noted only by the patient herself. So far as these symptoms are concerned, we must find out how a patient is feeling by listening to what she says about her condition.

On the other hand, certain general changes in appearance and behavior are commonly interpreted by any observer as signs of illness. These are called *objective* symptoms.

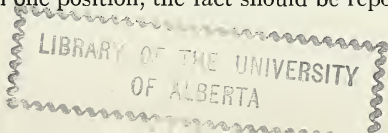
We shall discuss first some of the objective symptoms. Later on in this chapter we shall return to the subjective symptoms.

General objective symptoms. — One often shows illness in the face by a dull, pained, anxious, or excited expression. The skin about the eyes may be puffy or deeply circled. Activity is lessened. One appears to feel weak, and sits quietly, or lies down. In some cases, there is extreme drowsiness and in others, a restlessness and inability to sleep. One is likely to be cross, irritable, or unreasonable. The voice may be weak or hoarse. There is usually a loss of appetite.

We frequently see symptoms of illness in the condition of the skin. If it is dry and hot and the cheeks are flushed, the temperature should be taken. A moist, cold, clammy skin often accompanies extreme weakness. The color of the skin is also important. If the blood is low in oxygen, the surface of the body has a bluish look which is especially noticeable in the lips and under the finger nails. When the skin has a yellowish cast, the patient is said to be jaundiced.

Other definite objective symptoms of illness include vomiting, chills, a hard or dry hacking cough, an inflamed throat, and white or gray patches in the throat. These patches are present in cases of diphtheria.

A patient's habitual position sometimes gives indication of pain or soreness because one naturally takes a position which relieves the painful area. For example, if you had a sore foot you would avoid standing on it. If the patient lies constantly in one position, the fact should be reported to the



physician. Restlessness or continual tossing should also be reported.

One of the first questions the doctor always asks about a patient is: "Have her bowels moved today?" The daily bowel movement is even more important during illness than in health.

When a person is ill in bed there is a tendency toward constipation because of the lack of exercise. Diarrhea (frequent loose discharges from the bowels) is a symptom which accompanies certain diseases. The number, size, color, and consistency of the bowel movements should always be noted and reported during illness.

The quantity of urine is usually lessened by disease. Urine contains waste materials which are harmful if not eliminated. The physician always wants to know whether the urine is pale or highly colored. Anything unusual in color or odor is noted and reported.

Sometimes a doctor wishes to find out how much urine is excreted in twenty-four hours. A graduated receptacle is kept in the bathroom to measure the amount of urine each time the patient voids, and the number of ounces is charted for the doctor. If he asks for a specimen of urine, wash and rinse an eight- or ten-ounce bottle, boil it for five or ten minutes and close it with a stopper. The first time the patient voids in the morning, fill the bottle with urine and set it in a cool place.

Since temperature, pulse, and respiration furnish such a reliable index of the patient's condition, each of these will now be considered in detail.

Temperature. — Bodily heat is produced by the burning of food materials in the tissues, and is fairly evenly distributed

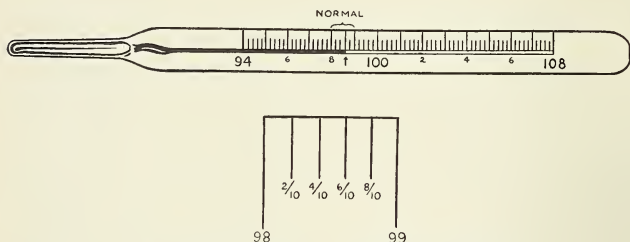
throughout the body by the circulation. The body is constantly producing heat. There is also a continuous loss of heat from the skin and the lungs.

Body temperature does not mean skin temperature. During health, the body temperature varies only a fraction of a degree, no matter how much the skin temperature may change with the surrounding conditions. The degree of the body temperature is ordinarily determined by the use of a clinical thermometer placed in the mouth. Sometimes the temperature is taken in the armpit (axilla) or the rectum.

A clinical thermometer is one that is used to take a person's temperature. It is a glass rod with a little bulb of mercury at one end and a hollow tube extending from the bulb through the entire length of the rod. The heat of the body expands the mercury so that it runs up the hollow tube. The front of the thermometer forms a triangle. Along one side of the triangle there are numbers and on the other side, a series of lines of two different lengths. Each of the long lines marks off one degree of heat and each short line marks off two-tenths of a degree. To read the thermometer, look along the sharp edge (the point of the triangle) between the numbers and the lines until you see the end of the column of mercury in the tube. You will be able to see it more easily if you stand with your back to the light and look down upon the thermometer.

The most common method of taking the temperature is by mouth. Holding the upper end of the thermometer with the thumb and first two fingers of your right hand, shake it down and away from you until the mercury is below ninety-six. Then place the bulb end of the thermometer under the patient's tongue and ask her to hold it with her lips. If held

by the teeth it may be broken. The patient must keep her lips tightly closed until the thermometer is removed. It must be held in the mouth until the mercury reaches a constant point. The length of time necessary depends upon the make of the thermometer, but two minutes is usually sufficient. When the thermometer is removed, the temperature is read and recorded. Temperature should not be taken for fifteen minutes after foods or fluids have been given.



A MOUTH CLINICAL THERMOMETER

During an illness in the home the thermometer may be kept on the dresser or somewhere in the room out of reach of the patient. Use a small glass filled with clear water, with a little piece of absorbent cotton in the bottom to lessen the danger of breaking the thermometer. Every morning the glass and the thermometer should be washed thoroughly. Use a piece of gauze or cotton with soap and cold or lukewarm water. After rinsing the glass and thermometer carefully, put fresh cotton in the bottom of the glass, fill it with cold water, and place the clean thermometer in it ready for use. Small squares of gauze or linen may be kept on the dresser nearby to use for wiping the thermometer each time before

and after taking the patient's temperature. When the patient is well again, soak the thermometer in alcohol or some other antiseptic solution for an hour or so before putting it away.

A temperature is seldom taken in the armpit (axilla) because it is less accurate. This temperature is normally about a degree lower than that of the mouth. It is taken by using



A THERMOMETER TRAY

the mouth thermometer, shaking it down below ninety-six and, after wiping the axilla dry, placing the thermometer in the axilla next to the patient's skin. The arm must be pressed tightly against the chest wall and the thermometer held in place for five minutes.

The third and most accurate method of taking a temperature is *per rectum*. The rectal temperature is normally about a degree higher than that of the mouth. There is a special kind of thermometer for taking the rectal temperature. It is of slightly different shape from the one for the mouth, having

a rounder bulb with a blunt end which will not injure the tissues. To take the rectal temperature, shake the thermometer down below ninety-six, lubricate the bulb end with a little oil or vaseline, and insert it gently about two inches into the rectum. Leave it from two to three minutes before removing and reading it. An adult always lies on the side when having a rectal temperature taken. The patient herself, if she is able to do so, may prefer to insert and hold the thermometer rather than to have the attendant do it.

Babies, small children, and drowsy, delirious, or unconscious patients should always have the temperature taken *per rectum*.

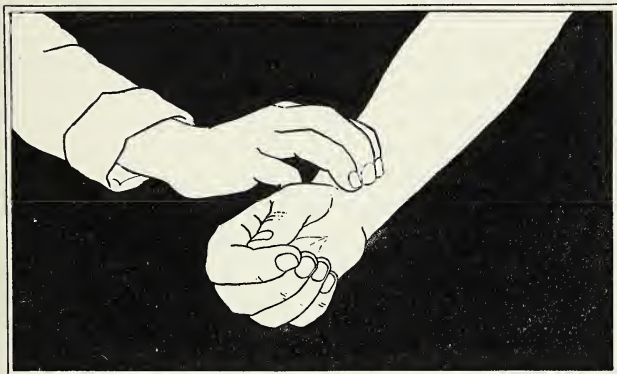
The normal mouth temperature is about 98.6° F. It is commonly written 98° . This point is indicated on the thermometer by an arrow, a small triangle, or a red line. The temperature of a perfectly healthy person may vary within a degree during the day, reaching the lowest point between two and six o'clock in the morning and rising to the highest point between four and eight o'clock in the afternoon. Even slightly greater variations, if they are not consistent or continuous, may have no particular meaning in persons who feel perfectly well; but a variation of two full degrees Fahrenheit during the day cannot be considered normal. A temperature below 98° is called subnormal, and one above 99.5° is called fever.

A physician judges the type of fever from the highest and lowest points of the temperature in one day. It is, therefore, important to take the temperature at the same time every day and to record it for the doctor. In any form of illness the temperature is taken twice a day, at seven or eight in the morning and at three or four in the afternoon. A doctor

may order the temperature taken every four hours or even every two hours.

If you have reason to believe that a person is ill, you will find it an advantage to be able to take the temperature before calling the physician. Then you will have something definite to tell him in regard to the person's condition.

It is not wise to get into the habit of taking your own tem-



COUNTING THE PULSE

perature. Take it only when you feel ill or when you have other definite symptoms.

The pulse. — Every time the heart beats, it forces a wave of blood along the arteries. By placing your fingers over an artery which lies near the surface of the body, you can feel the expansion of the arterial wall with each beat of the heart. This pulsation of the blood in the arteries against your fingers is called the *pulse*. Counting the pulse is an easy way of counting the number of heartbeats per minute. The most

convenient place to count the pulse is on the radial artery at the wrist. You will find this artery on the thumb side of the inner wrist. Placing three (or at least two) fingers over the radial artery, feel the pulse for a short time in order to get an idea of what it is like. Then count the number of beats in fifteen seconds. Multiply this number by four to find the pulse rate per minute. For example, if you count twenty beats in fifteen seconds, the pulse rate is eighty per minute.

The normal pulse rate is from 72 to 80. It is somewhat higher in women than in men and will also vary with the position of the patient. The pulse of a normal man may be 66 when he is lying down, 71 when he is sitting, 81 when he is standing, and even more than that when he is walking. Temporary changes in the pulse rate are noticeable during exercise or emotional excitement. Age also makes a difference in the pulse rate. At birth the normal child's pulse is from 124 to 144; from six to twelve months of age it is 105 to 115; and from two to six years old it is from 90 to 105. It gradually becomes slower until about the age of fourteen or fifteen when it reaches the adult rate.

A physician would not expect the home attendant to observe anything in regard to the pulse except its rate. As soon as you are able to count the rate accurately, however, you will begin to notice other characteristics — whether the pulse is weak or strong, regular or irregular.

During illness the pulse is counted and recorded whenever the temperature is taken. The variations in rate during the day are often significant to the doctor.

Respiration. — An inspiration (breathing in) plus an expiration (breathing out) makes a complete respiration. An

adult normally breathes sixteen to twenty times a minute; a child about twenty to twenty-five times; and an infant, about thirty to forty-four times.

Most persons probably find it easier to count the respirations for a full minute, but they may be counted for half a minute and the result doubled to get the rate per minute.

Ordinarily, you breathe without giving it your conscious attention, but you can control your breathing to a certain degree if you care to. For this reason it is best to count the respirations without the patient's being aware of what you are doing. The easiest way is to keep your fingers on the wrist and pretend to be counting the pulse while you watch and count the rise and fall of the chest. Sometimes it is necessary to place your hand upon the patient's chest in order to count the respirations.

Rapid respirations are characteristic of some diseases, and a slow rate is characteristic of others. Sometimes the breathing is noisy with a wheezing, sighing, or snoring sound. The respirations may be deep or shallow, regular or irregular, easy or painful.

Subjective symptoms. — Now let us consider the second class of symptoms, the subjective symptoms, which can be noted only by the patient herself. These are pain, nausea, and fatigue.

Pain is the most important subjective symptom and it is the one which interests the patient most. It is not only uncomfortable to the body but is also exhausting to the nervous system. It disturbs one mentally as well as physically. There is occasionally a person who is so sensitive to pain that she unconsciously exaggerates it. On the other hand, a slight pain should not be ignored, for it may indicate that

something is seriously wrong. The physician is the one who must determine the significance of pain and its relation to disease. Any pain complained of by the patient should be noted by the attendant and reported to the physician. There is sometimes a temptation to feel impatient with constant complaints of pain, but it should be remembered that there are more cases of real pain than of pretense or exaggeration.

The attendant may learn from her own observations some facts about the patient's suffering. Notice whether pain seems to bother her more at one time than another, and whether it is relieved or increased by heat, cold, or change of position. It is best not to talk much to the patient about her pain, because she is likely to think too much about it anyhow. Find out where the pain is, and what it is like — whether dull, sharp, stabbing, throbbing, or continuous.

Avoid asking the patient how she feels. Observe her appearance, watch her actions, know what she eats and drinks, note the character of the excretions, see her reaction to treatments and medicines, take her temperature, pulse, and respirations carefully, and you will have definite information regarding her condition. The patient should not be informed of temperature or pulse variations.

REVIEW

1. What do we mean by objective symptoms? Subjective symptoms?
2. Name six objective symptoms.
3. Name three subjective symptoms. Which one is the most important?
4. What symptoms would lead you to take a person's temperature?

5. Describe the three methods of taking body temperature. Which is most commonly used? Which is the most accurate?
6. What is the normal mouth temperature? Is the rectal temperature higher or lower? How much?
7. How would you take a baby's temperature? A small child's? Why?
8. What is meant by subnormal temperature? By fever?
9. How often is the temperature taken? When taken only twice a day at what hours would you take it? Why?
10. What does the pulse show? Where is it usually counted? How long is it counted? What is the normal pulse rate of an adult?
11. Is the child's pulse higher or lower than an adult's?
12. What is meant by respirations? How do you count them? What is the normal rate for an adult?

SUGGESTED ACTIVITIES

1. Add to your scrapbook any material suggested by this chapter.
2. Divide the class into groups of two and practice taking each other's temperature. (Follow carefully the directions of your teacher in sterilizing the thermometer after each use.)
3. Find your own pulse at the radial artery. Let the teacher time you while you count it.
4. Demonstrate how to set up a thermometer tray.
5. Demonstrate how a thermometer is cleaned before it is put back into its case.

CHAPTER VII

FEEDING THE SICK

What relation is there between food and good looks?

Between food and growth?

Between food and recovery of health after illness?

Do you know what general diets are commonly used in illness?

Would you know what foods belong to each of these diets?

Classification of food. — The chief consideration in selecting food is to secure the substances which the body needs. *Proteins* supply the material necessary for growth, muscle-building, and repair. The best proteins for children are found in milk and eggs. Meat, fish and poultry are rich in protein and may be used in the diet once a day. Cheese is a protein food which is sometimes used as a substitute for meat or fish. Beans and peas are also good sources of protein.

Carbohydrates and *fats* are needed for energy. Carbohydrates are divided into two groups: the starches, found in such foods as cereals, bread, macaroni and spaghetti, and potato; and the sugars, found in all sweet foods — milk, fruits, vegetables, honey, maple sirup, molasses, and cane sugar. Fats are secured chiefly from cream, butter, oils, and fat meat.

Mineral content is always an important item in the diet. *Iron* is necessary to provide hemoglobin for the blood. It is found in liver, red meats, eggs, whole grains, fruits, vegetables, and molasses. *Calcium* and *phosphorus* are needed for the building of sound teeth and bones. The best source of cal-

cium is milk. Calcium is also found in whole grains and in fruits and vegetables. Phosphorus occurs in milk, eggs, whole grains, fruits, and vegetables.

The various *vitamins* in food stimulate good bodily development, promote health, and help the body to resist certain diseases. They are found in milk, whole grains, eggs, fruits, vegetables, and glandular cuts of meat (liver and kidney).

Roughage in food stimulates the activity of the intestine and helps to keep the digestive tract clean. Roughage consists of fibers of cellulose which cannot be digested in the body and therefore pass through the whole digestive tract unchanged. Cellulose is supplied chiefly by whole grains and by certain fruits and vegetables. An abundance of these foods will help to prevent constipation.

Selecting food for the sick. — A simple diet is used for a person who is ill. The food should be cooked in such a way that it is tasty and easily digested. Because the patient is less active, she does not need as much food as a well person unless additional food for repair and waste is ordered by the physician. Her diseased or weakened condition may make digestion more difficult, and for this reason sweet foods, rich foods, highly seasoned foods, and fried foods should be avoided.

In certain diseases the diet is part of the medical treatment, as in diabetes, for example. Sometimes a disease is lessened or entirely cured by omitting certain foods. In such cases the doctor prescribes a special diet. His specific orders in regard to food must be followed to the letter. When a patient is on a special diet, absolutely nothing is given except the food and liquid prescribed.

The diet of a patient who is suffering from an acute condi-

tion and running a high temperature is usually very limited. The diet is gradually increased as the condition improves, the temperature drops, and the patient becomes more active. For general purposes, sickroom diets are conveniently divided into four classes: the *liquid* diet, the *soft-solid* diet, the *light* or *convalescent* diet, and the *full* diet. There are many kinds of special diets but these general diets are commonly used by the average physician.

Liquid diet. — The liquid diet serves two purposes: it furnishes an easy method of forcing fluids through the body and it supplies enough nourishment in small quantities for the very ill person. The patient is fed every two or three hours, as ordered. Milk is the most nourishing liquid, and is used freely in this diet. It can be served in many ways to give variety.

The following is a list of fluids from which the liquid diet is usually selected:

Milk	Clear broth (beef, chicken,
Cocoa	mutton)
Eggnog	Clear soup
Orange albumen	Fruit juice
Beef juice	Malted milk
Ginger ale	Cereal gruel
Grape juice	Tea
Coffee	

In choosing the liquid, always consider what is suitable for the time of day when it is served, and what seems most tasty for the particular season of the year.

A suggested one-day menu for an adult on liquid diet is as follows:

- 7 A.M. Orange juice or coffee
- 10 A.M. Glass of milk
- 1 P.M. Cup of chicken broth
- 3 P.M. Eggnog or fruit juice
- 6 P.M. Beef broth
- 8 or 9 P.M. Glass of milk

Brief directions for the preparation of these fluids follow:

Orange Albumen

Drop the white of an egg (albumen) into a glass of orange juice. Stir the mixture well with a fork until the albumen separates. The egg white may be broken up by stirring it with a fork before adding it to the orange juice, but it should not be beaten until it is foamy.

Cocoa Paste

Cocoa paste is used to flavor milk drinks and eggnogs. To a cup of cocoa add enough water to make a thin paste. Cook in a double boiler for twenty or thirty minutes, stirring frequently. Pour into a small dish, cool, and put into the ice box for use as needed.

Eggnog

Beat the white of an egg until it is stiff. Add the yolk of the egg and about a tablespoonful of cocoa paste with a teaspoonful of sugar. (Adapt the amount of cocoa and sugar to the taste of the individual.) Whipping this into a smooth paste, stir it into one half-pint of cold milk. Serve at once. To chill more thoroughly, set the glass in a small bowl and pack crushed ice around it. (Eggnog may be made without the cocoa or may be flavored in whatever way appeals to the patient.)

Beef Juice

Take half a pound of beef cut from the lower part of the round and sear it in a hot pan, turning it quickly so that the juice will not run out. Cut it into small pieces and press out the juice with a meat press or a lemon squeezer. Add salt to taste. Skim off the fat. Serve in a small cup or glass set in a bowl of lukewarm water. This brings the beef juice to body temperature and makes it taste better.

Chicken Broth

Clean and disjoint a chicken. Remove the flesh from the bones and cut it in small pieces. Crush the bones and include them in the broth. Use a pint of cold water for every pound of chicken. Add salt to taste. Bring the liquid to the boiling point and let it simmer three hours. Strain into a jar and let cool before placing in the ice box. When you wish to serve it, remove the fat with a spoon, and then heat the broth without allowing it to boil. Serve in a heated cup.

Beef Broth

Cut a pound of beef into small pieces and cook it in a pint and a half of water. Use the same method as that given for chicken broth.

Mutton or Lamb Broth

Use a pound of mutton or lamb with all fat and skin removed. Cut into small pieces and cook in one quart of water. Follow the directions for making chicken broth.

Hot Cocoa (first method)

Mix two teaspoonfuls (or more, if desired) of cocoa paste and sugar to taste. Add one pint of cold milk. Heat in a double

boiler. Do not allow the mixture to boil. Stir frequently with an egg beater. Serve with a bit of whipped cream.

Hot Cocoa (second method)

Beat an egg slightly. Mix the egg with two teaspoonfuls of cocoa paste, sugar to taste, and one pint of cold milk. Heat in a double boiler, whipping frequently with an egg beater. Serve with whipped cream. Compare the nutritive value of cocoa made by these two methods.

Cereal Water

Use one or one and a half tablespoonfuls of rolled oats to a pint of water and boil for three hours in a double boiler. Some of the water will evaporate and this should be replaced with hot water to make a full pint of liquid. Salt to taste. Strain through a fine sieve. Keep in the ice box and serve hot or cold, as desired.

Cereal Gruel

Mix one tablespoonful of cereal flour (barley, rice, oats, farina) with enough cold water to form a paste. Add half a cup of boiling water slowly, stirring the mixture constantly. Boil two or three minutes and then cook in a double boiler for fifteen or twenty minutes, stirring frequently. Salt to taste. Scald half a cup of milk and add it to the mixture. Serve hot.

Another way of making cereal gruel is to cook a thin cereal, strain it, and mix it with milk until the gruel is thin enough for the patient to drink. This may be served either hot or cold.

Soft-solid diet. — As the patient's condition improves, she is allowed a few simple solids. These may be semi-solids or soft-solids. Here is a list of the foods from which the soft-solid diet is usually selected:

Milk toast	Baked, steamed, or boiled
Broth toast	custard
Cream of vegetable soup	Junket
Soft-boiled egg	Fruit gelatin or Jello
Poached egg on toast	Ice cream or sherbet
Scrambled egg on toast	Apple sauce or baked apple
Cooked cereal	Prunes

In most cases, creamed chicken, creamed fish, or a creamed vegetable on toast may be given once a day, preferably at noon.

The following is a suggested one-day menu for an adult patient on a soft-solid diet:

<i>Breakfast</i>	<i>Dinner</i>	<i>Supper</i>
Half orange	Poached egg on toast	Broth toast
Whole-wheat cereal	Jello	Custard
Coffee	Milk	Milk

These foods are prepared as follows:

Milk Toast

Heat a pint of rich milk in a double boiler. Bring it almost to the boiling point but do not let it boil. Cut two slices of bread, trim off the crusts, cut the bread lengthwise in thirds. Toast it on both sides until it is brown. After buttering it, place it in a warm soup plate and cover it with a dish. Serve the hot milk in a small covered pitcher. The patient pours the milk over the toast and seasons it with a little salt or sugar.

Broth Toast

This is made the same as milk toast except that beef, chicken, or lamb broth is used over the toast in place of milk.

Poached Eggs

An egg should be cooked below the boiling point in order to have the white soft and digestible. Break an egg into a shallow pan of boiling water. Season with salt and pepper and move the pan to a place on the stove where the water will not boil. Cover the pan, let the egg stand in the hot water until the white is firm. Remove the egg with a skimmer and place it on a piece of buttered toast. The toast may be softened with a little hot water from the pan, if desired.

Junket

Warm a cup of milk to body temperature. Add a few grains of salt, a teaspoonful of sugar, and a drop or two of vanilla. Dissolve half a junket tablet in a teaspoonful of cold water and add to the mixture. Avoid stirring after the dissolved junket tablet is thoroughly mixed with the milk. When firm, place it on the ice.

Baked Custard

Beat an egg slightly and add two teaspoonfuls of sugar, a small pinch of salt, and a drop or two of vanilla. Scald two-thirds of a cupful of milk and stir into the mixture slowly. Pour into a small buttered cup. Set the cup in a pan of hot water and bake in a slow oven until firm.

The light, or convalescent, diet. — This diet may vary considerably with the individual case. It usually consists of foods which digest easily and furnish plenty of building and regulating materials. In addition to the foods used in the soft-solid diet, the following may be given, unless the diet is restricted by the physician:

Tender steak	Lettuce
Lamb chop	Celery
Chicken	Romaine
Fish	Tomato
Well-cooked vegetable	Variety of fruits
Baked or mashed potato	Variety of desserts

Meat should be given only once a day, at the noon meal.

Here is a suggested one-day menu for an adult patient on a light diet:

Breakfast

Grapefruit
Whole-wheat cereal
Soft-boiled egg Bran muffin
Coffee

Dinner

Beef broth
Lamb chop Baked potato
Spinach
Whole-wheat bread and butter
Ice cream Hot or iced tea

Supper

Chicken broth Toasted crackers
Creamed peas on toast
Lettuce salad
French rolls and butter
Prunes
Milk

Full diet. — The full diet includes the whole well-balanced menu. A person who has been ill should avoid foods which are rich, sweet, highly seasoned, or fried. The meals should be planned to meet the particular needs of the patient. Remember that she has little or no exercise and is likely to be troubled with constipation unless her food is chosen wisely and plenty of water is taken daily. The special diet for constipation will be considered later.

A patient on full diet eats three meals a day, with dinner at noon and a light supper at night. Here is a suggested one-day menu for an adult on full diet:

Breakfast

Fresh peaches
Whole-wheat cereal
Scrambled egg Bacon
Toast and butter
Coffee

Dinner

Mutton broth Toasted crackers
Steak Mashed potatoes
Carrots Peas
Bread and butter
Tomato and lettuce salad
Sherbet Tea

Supper

Creamed fish on toast
Vegetable salad
Toast and butter
Jello
Milk

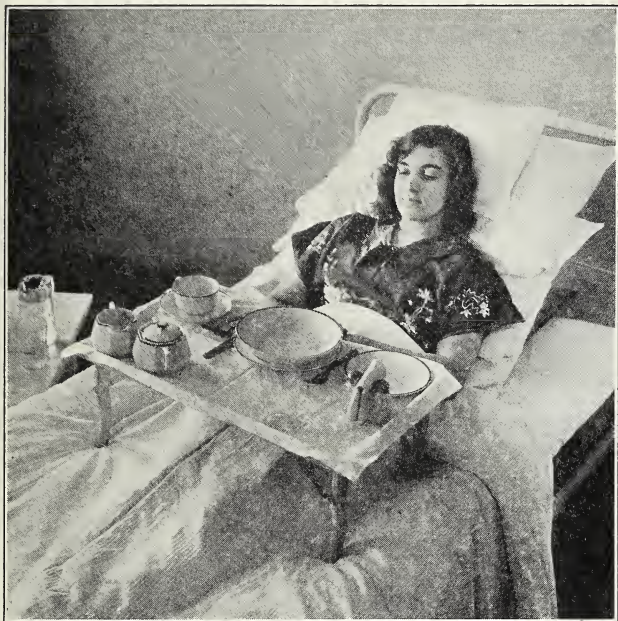
Intermediate nourishment. — The patient may need extra nourishment in addition to meals. When ordered by the doctor or desired by the patient, liquids or semisolids are served between meals. This is spoken of as intermediate nourishment.

The food chosen depends largely upon the patient's taste, ailment, and ordered diet. If the patient is underweight and her appetite is good, nourishing liquids may be served. If she is overweight, fruit juices or ginger ale will be preferred. Whenever milk, cocoa, or broth is served, it should be accompanied by toast or crackers. Intermediate nourishment is given in the middle of the morning, the middle of the afternoon, and at bed time. It is not needed usually by a patient on a full diet, but it may be quite beneficial to one on a soft-solid or light diet.

The tray. — A large oblong tray is the most satisfactory kind to use in serving food to the sick, because it will hold all the necessary articles in a convenient way. Tin or enamel is good to use because either of these is easy to keep clean and will not be injured by hot dishes or spilled liquids. If there is no large oblong tray of tin or enamel in the house, one will, of course, use whatever kind is at hand. Cover the tray with a large napkin or doily and change this as often as necessary to keep it spotlessly clean. Set the tray attractively, using dishes of one pattern arranged conveniently for the patient. In placing a cup, put the handle of the cup at the right so that the patient can reach it easily. A coffeepot or teapot should be set with the nose over the cup in order to protect the tray cloth if any liquid is spilled in carrying the tray to the sick-room.

If there is room on the tray, a rose or a small spray of

flowers may be added sometimes to surprise and delight the patient. A tiny flower, a geranium leaf, or rose petal may be put in the finger bowl, if one is used. These little attentions afford variety and usually give pleasure.



SERVING A TRAY TO THE BED PATIENT

A bed tray is very convenient in the sickroom. It is really a small table with a tray top and with legs which unfold so that it can be set across the patient's lap. The ordinary tray is placed on this little table tray so that a patient sitting up

against a back rest can feed herself comfortably. A pine crate or box with two sides knocked out makes a good substitute for the table tray. A long, low footstool may be used.

Serving food to the sick. — The patient's meals should be served at the same time every day. The most effective way to stimulate the patient's appetite is by serving food that has been properly selected and carefully prepared.

The first thing to do in preparing a meal is to set the tray. Then prepare the cold dishes and put them in the ice box until you are ready for them. Cold food should be served in cold dishes, and hot food should be served in warm dishes which are covered while being carried to the sickroom.

Serve only small portions. A patient with a delicate appetite loses all desire to eat when confronted by a large quantity of food. If a small portion is served daintily, she will be tempted to taste it even though she does not feel hungry. If it tastes good, she is likely to eat it all and may even ask for more.

It is easy to serve a meal in courses, and this enables one to serve food hot. For example, in serving a breakfast to a patient on a light diet, carry in first only the fruit, cereal, and water. The cup and saucer, salt and pepper shakers, silverware, cream, and sugar may also be in their places on the tray. While the patient is eating the fruit and cereal, prepare the toast and egg. Cover these with a saucer or soup plate, pour the coffee, and carry them all on a small tray to the sickroom. Removing the fruit plate and cereal dish, uncover the egg and toast, and place them in front of the patient. Serve the coffee, and then carry out the small tray with the used dishes.

Notice what your patient likes especially and give it to her

as often as advisable, but remember that she may lose her taste for a food which is served too often. *Do not consult the patient about the menu.* If you happen to serve a food which she does not like, avoid it in the future unless the doctor particularly wishes her to eat it. Do not serve tea or coffee at supper, because they are stimulants and may cause sleeplessness. Partially consumed food should never be left in the patient's room.

Feeding the helpless patient. — When a patient is unable to feed herself, the attendant must feed her. Place the tray on the bedside table and sit on a chair facing the patient. Place a napkin under the patient's chin and over the pillow. Feed her slowly, waiting a bit after each spoonful so that she will have time to chew her food. Do not fill the spoon more than two-thirds full, and place the point of the spoon in the patient's mouth. When giving liquids, let her use a glass drinking tube or a straw. Take care that the glass or cup is not more than two-thirds full.

REVIEW

1. What is protein used for? In what foods is it found?
2. What are carbohydrates used for? In what foods are they found?
3. What are fats used for? In what foods are they found?
4. What minerals are important? What is their use? In what foods are they found?
5. Of what use are vitamins? In what foods are they found?
6. Why is roughage important? What foods supply roughage?
7. Name the four kinds of general diet used in the sickroom.
Name some foods which may be included in each of these diets.

8. What foods may be given as intermediate nourishment?
9. What are the best ways to stimulate a patient's appetite?

SUGGESTED ACTIVITIES

1. Add to your class scrapbook some pages to illustrate a day's feeding on each of the four kinds of sick diet.
2. Make out a day's menu for full diet, using foods which you could get at the present time at prices which you could afford to pay.
3. Practice setting a tray so that it will look attractive and be conveniently arranged.
4. Find in the magazines pictures of foods which can be used in sickroom diets. Mount these on thin cardboard and cut them out. Use these paper models to set your tray for the various diets.
5. Demonstrate various ways of serving the tray to the patient in bed.

CHAPTER VIII

MEDICINES

Have you ever taken medicine?

Why did you take it?

Who prescribed the medicine?

In what other ways do physicians treat illness?

In trying to cure disease, physicians today depend upon nature as well as upon the curative action of drugs. They try to discover the cause of the disease, get rid of it, and give nature a chance. The body itself always attempts to effect a cure and, in some diseases, this can be done without the aid of drugs when favorable conditions are provided. For example, tuberculosis may be arrested by rest, proper food, and an abundance of fresh air and sunshine.

Another step in modern science is the attempt to prevent illness. Some diseases are prevented by getting rid of the sources of infection. Typhoid fever, yellow fever, malaria, and bubonic plague are among the diseases which are now controlled through public-health activities. Other diseases, such as smallpox and diphtheria, are controlled through immunization (discussed in Chapter XIII). Many kinds of diseases can be avoided by keeping the body in good health and by having an annual physical examination to detect disease in its early stages.

Proper use of medicine. — There is still, however, a place for medicines and drugs in the treatment of illness. There are a few diseases which are actually cured by the use of

specific drugs. In other cases, drugs are used to help nature bring about a cure, or to make the patient more comfortable. Medicine, as a rule, should be used only under the direction of a well-trained physician, for he only understands properly the relation of drugs to the body. There are, however, a few standard remedies which may be used without prescription and every household should have these on hand for emergency. The home attendant needs to be acquainted with these and also to understand how to give medicines which have been prescribed by the physician.

The household medicine cabinet. — In order to meet emergencies every home should keep a few standard remedies and the articles which will be needed when giving them. A plain cabinet which has a lock and key is a safe, convenient place for keeping medicines. The cabinet is usually hung rather high on the bathroom wall so that children cannot reach it. The key should be kept in some nearby place where it cannot be seen or reached by small children. The cabinet should be kept clean and should be used for no other purpose than to hold medical supplies.

Contents of the medicine cabinet. — Every household should keep some standard cathartics. A *cathartic* is a medicine which evacuates the bowels. Cathartics should not be used often and should never be depended upon for securing daily elimination.

Waste material in the intestine is eliminated by muscular contractions. Most cathartics act as a stimulus to increase the number and strength of these contractions. A few substances, like Epsom salts, act by flushing the intestine with fluid rather than by stimulating the muscles. If any cathartic is used too often, the intestine becomes accustomed to it so

that evacuation will not occur without this extra and unnatural stimulus. You can readily see that it is much wiser to help nature by eating proper food, taking daily exercise, and drinking plenty of water than to force nature by the frequent use of cathartics.



A WELL-ARRANGED MEDICINE CABINET

Cathartics are occasionally needed, however, for a rapid emptying of the bowels. In cases of food poisoning, a cathartic helps one to get rid quickly of the food which is causing the trouble. When one feels a cold coming on, it is sometimes helpful to increase elimination by the use of a cathartic. During illness, when the intestine becomes sluggish from lack of activity, cathartics often have to be used.

Perhaps your family physician will advise you in the choice of cathartics. Usually the home medicine cabinet contains castor oil, Epsom salts, and one mild laxative. There are many good laxatives. Usually it is possible to find one which seems particularly well suited to your own needs. Remember that even the mild laxative should not be used habitually.

Epsom salts and castor oil are used when quick action is essential. Both should be kept in the home because there is a difference in their effect upon the intestine and either one may be ordered by the physician. There are many forms of tasteless castor oil. When taking castor oil, pour it into a small medicine glass containing orange juice. Have another glass of orange juice ready and take two or three mouthfuls of it before swallowing the oil. Drink the oil and then finish drinking the orange juice. This method of taking castor oil keeps the oil from sticking to the mucous membranes of the mouth and thereby enables one to avoid the disagreeable taste. A drink of hot tea or coffee taken twenty minutes or half an hour later will make the oil work faster.

Stimulants are medicines which excite activity within the body. The one most commonly used is aromatic spirits of ammonia. Black coffee and strong tea are effective stimulants, but it takes time to prepare them and for this reason they are not useful in an urgent emergency. Whiskey or sherry may be prescribed by the doctor.

Aromatic spirits of ammonia are either inhaled or given by mouth. The usual dose by mouth is half to one teaspoonful in half a glass of cold water. The simplest method of stimulating an unconscious person is to hold smelling salts or aromatic spirits of ammonia to her nostrils. The use of these

stimulants in cases of fainting and exhaustion will be considered later. Aromatic spirits of ammonia loses its strength rapidly and should be renewed often.

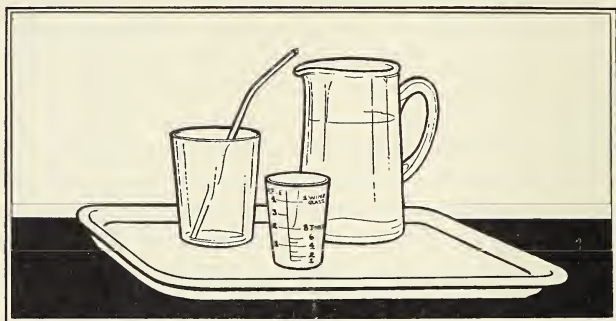
Sodium bicarbonate (baking soda) is a good home remedy for some kinds of indigestion. Half a teaspoonful of sodium bicarbonate is taken in a glass of hot water. Any unusual or persistent pain in the stomach or intestines should be diagnosed and treated by a physician.

Care of medicines. — We cannot place too much emphasis upon the necessity of keeping all medicines out of the reach of children. The safest place is in a medicine cabinet which is kept locked. Keep the cabinet clean; wash the shelves frequently, and keep them covered with white paper which is changed as often as necessary. Keep the medicine bottles clean by wiping them off occasionally with a damp cloth and set them on the shelves so that the labels can be read easily. Poisons, or medicines containing poison, should be kept on a separate shelf and plainly marked "Poison." It is desirable to have poisons in odd-shaped or colored bottles so that they are quickly recognized. In arranging the contents of the medicine cabinet, plan a regular place for each group of articles — the cathartics, stimulants, first-aid materials, and such articles as medicine glass, eye glass, medicine dropper, thermometer, etc.

Most medicines lose their strength after a while and should not be kept indefinitely. Special medicine ordered by the doctor during an illness should be thrown away after the illness. Never give to another person a prescription which was ordered for one particular member of a family. In prescribing a medicine, the doctor considers the person's age, weight, con-

dition of heart, and many other things in addition to the nature and severity of the disease itself. What has been helpful to one person may be harmful to another.

The medicine tray. — When giving medicines regularly to a bed patient, a medicine tray is convenient. Cover a small tray with a napkin or doily, and keep a medicine glass, drinking glass, glass tube, and small water pitcher on the tray.



THE MEDICINE TRAY

This tray may be kept covered on a shelf in the pantry or bathroom. When it is time to give a medicine, fill the pitcher with cold water, prepare the medicine from the medicine cabinet, and carry the tray to the bedside. After giving the medicine to the patient, wash the glasses and pitcher and replace them on the tray ready to use later.

How to give medicines. — There are many ways of giving drugs and medicines. You are not likely, in the home, to give them except by mouth, by rectum, or by external application.

Medicines given by mouth are usually in liquid, powder, capsule, or pill form. The size of the dose and the time be-

tween doses is always stated by the physician. The order may call for a certain amount given once or twice a day at a definite time, or three times a day twenty or thirty minutes before meals, or three times a day twenty or thirty minutes after meals. Such directions must be followed exactly. It is as important to give medicine on time as to serve meals on time.

The best way to measure liquid medicines is by use of a medicine glass which has a scale to show the number of teaspoonfuls. When pouring medicine, hold the medicine glass on a level with the eye so that you can see when the liquid is exactly level with the line on the glass.

When it is time to give a medicine, go to the medicine cabinet and read the label carefully before taking the bottle from the shelf. Shake the bottle in order to mix the contents thoroughly. Be careful in removing the cork not to touch the part which goes into the bottle, and place the cork on the table or tray with the topside down. Read the label again before pouring out the required dose. It is important to keep the label clean so that it can be read easily. For this reason, be careful to hold the bottle so that you pour from the side opposite to the label. Never give medicine from a bottle if the label cannot be accurately read. After the medicine has been poured, cork the bottle and, as you set it back on the shelf, read the label for the third time. Get yourself into the habit of reading labels in this way, because it lessens the chance of your giving the wrong medicine. Such a mistake might endanger the patient's life.

Most liquid medicines are diluted with a little water, and the patient usually likes a drink of water to follow the medicine. As a rule, cough medicines are not diluted. Acids,

tonics, or medicines containing iron should always be taken through a glass tube or straw to protect the teeth from dis-



POURING MEDICINE

coloration. If the medicine is quite bitter, the patient may eat a cracker or piece of hard toast afterward. When giving medicine to induce sleep, have the patient all ready for the

night before giving the medicine. Follow the medicine with a drink of warm milk or cocoa.

Pills and capsules are quite easy to take. They should be given to the patient on a spoon or in a dry medicine glass. She places them on the back of her tongue and swallows them with the aid of a little water.

A powder may be diluted in water and taken as a liquid; or it may be taken directly from its paper wrapping if you crease the paper and slide the powder to one end so that it can be poured well back on the patient's tongue. Then give the patient a drink of water to help her swallow the powder.

Giving medicine by the rectum. — Medicine is sometimes given through the rectum in liquid or suppository form. Medicine combined with cocoa butter or some such substance and made into a little cone is called a suppository. It is lubricated by smearing with vaseline and is inserted very gently into the rectum while the patient is lying on her left side. Suppositories should be kept in the ice box because they melt easily. They should be used only under the direction of a physician.

To give a liquid medicine by rectum, use a rectal tube with a glass funnel in one end. Prepare the medicine as ordered by the doctor and pour it into a small pitcher. Have the patient lie on her left side. Lubricate the end of the rectal tube with vaseline. Close the tube by pinching it together about six inches from the end which is to be inserted. Insert about four inches of the tube into the rectum. Holding the funnel quite low and keeping the tube pinched, pour in the medicine until all air bubbles are expelled. Then, releasing the tube, allow the medicine to flow slowly into the rectum. Keep the funnel full until all the liquid has been poured in.

Remove the tube at once and ask the patient to retain the fluid. A cleansing soapsuds enema is usually given and expelled a few minutes before giving medicine by rectum.

Inunctions. — Rubbing an ointment into the skin is spoken of as an *inunction*. Using a rotary movement, rub in only a small amount of the ointment at a time. When you have to apply an ointment where the skin is broken, spread it on gently with a piece of clean gauze or a wooden applicator. Liniments and oils are applied in the same way.

Sprays, gargles, and inhalations. — These are the three methods of applying medicine to the throat and nose, and the home attendant needs to know how to use them.

The nasal passages are connected with the sinuses and with the Eustachian tubes. Infected mucus in the nose or throat may easily be blown or washed through these passages into the sinuses or middle ear where it may set up a serious infection. Too hard blowing of the nose, especially with one nostril held shut, sometimes causes such a spread of infection and is to be avoided. One should never blow the nose hard. It is especially important to be careful in blowing the nose when one has a cold, because there is an added danger of infection at such a time.

A nasal atomizer is used when a liquid or oil *spray* is given. The head is held erect or bent slightly forward as the point of the blunt nozzle is inserted into the nostril. The atomizer bulb should be squeezed slowly and with even pressure. The head should never be turned on one side when using a nasal spray. If the solution used as a spray is not of the proper strength it may irritate and injure the lining of the nose. Only the solution prescribed by the physician should be used.

A spray may also be used in the throat. The head is held back with the mouth wide open, and the spray is directed first against one side of the back throat and then against the other.

Gargles are used to apply medicine to the throat and to keep it clean. A teaspoonful of salt or soda (or both) in a glass of warm water makes a good cleansing gargle. A warm gargle is more effective than a cold one. Children should be taught how to gargle their throats while they are well. A game can be made of the learning process by having them try to blow a feather while holding liquid in the throat. When they are ill they may be afraid to try a thing which is new. It is sometimes very difficult to use medicine in a child's throat and nose unless he understands how to gargle and how to open his mouth wide without being afraid.

Another method of introducing medicine into the nose and throat is by having the patient inhale the vapor of certain volatile drugs which have been put in boiling water and which vaporize with the steam. These *inhalations* relax the muscles of the throat, soothe irritated membranes, and relieve the congestion, thus making it easier for the patient to breathe. Such treatments are often ordered for patients suffering with asthma, croup, or bronchitis. Special equipment for inhalations can be purchased, but various simple substitutes may be used in the home.

To give an inhalation, measure into a small pitcher the amount of medicine ordered and add a pint of boiling water to it. Wrap a bath towel around the pitcher. Let the patient hold it near her face. Cover her head and the pitcher with a large bath towel. She may keep one corner raised a little to admit enough air for comfortable breathing. When

using a pitcher, the patient may inhale the vapor through a paper cone.

Steam inhalations may be ordered without medicine. A small teakettle may be used in giving a steam inhalation.

Patent medicines and dangers of amateur dosing. — The medicinal value of patent medicine is always questionable. The alcoholic content of many is high and they often contain habit-forming drugs, such as chloral, heroin, and morphine. These stimulate the person or deaden the pain so that he thinks he feels better. He may even decide that the medicine has cured him of his ailment when, as a matter of fact, he is merely under the effect of the drug it contains.

Sometimes the manufacturer of a patent medicine claims to have knowledge of secret drugs which effect marvelous cures. This is not true; there are no secret drugs. A physician who discovers a new drug or a new cure of any kind takes pride in making it known to the whole medical profession so that it may be used for the benefit of people everywhere.

The Pure Food and Drug Act requires that all patent medicines be correctly labeled. This does not prevent the manufacturer from misrepresenting the medicine in advertisements. Persons are often misled on this point. A person reads in a newspaper or street-car advertisement that a certain medicine will cure a certain disease. He buys a bottle and finds that he feels better when he is taking the medicine regularly. He does not notice from the label that the alcoholic content is very high, and fails to realize that he feels stimulated because he is having a patent-medicine cocktail regularly. Advertisements are written, not to help you, but to sell a product and make money. You must use your own intelligence and

knowledge to protect yourself from patent-medicine quacks.

There are serious objections even to the patent medicines which are not particularly harmful in themselves. The proper medical treatment is delayed while the patient tries out medicine which does not touch the real cause of his trouble, and he is spending money without getting results. Early treatment is essential in such diseases as cancer and tuberculosis. The sufferer may miss his one chance of recovery by neglecting to go to the physician in the first place.

The trained physician makes a careful examination, and may even use laboratory tests, X-ray, and other scientific aids to help him discover the cause of an illness before he attempts a cure. There are some persons, however, who, without any medical training or scientific knowledge, take and recommend medicine and treatments without consulting a physician. As a result, they treat *symptoms*, not *causes*, and valuable time is lost before the person is finally forced to see a physician. Meantime the disease is developing into a more serious form.

Another serious objection to amateur dosing is the fact that most medicines have more than one effect in the body. While one certain action of a drug may be more noticeable, there may be another action which is decidedly harmful. For example, many headache remedies have a bad effect upon the heart. Continued use of these may bring about a serious heart condition. The physician knows the various effects of a drug and can judge how it will affect the person for whom he prescribes.

Medicines which relieve pain and induce sleep often contain habit-forming drugs which may lead one to become an addict. There are persons who have become addicted to aspirin, co-

caine, morphine, and other drugs. Even though one feels certain of his will power and self-control he runs a serious risk when he allows himself to depend upon habit-forming drugs. Inability to sleep may be caused by lack of outdoor exercise. A glass of warm milk or cocoa (not boiled) with a few crackers at bedtime will often help one to sleep. If the wakefulness is persistent, a physician should be consulted.

Tonics are commonly used by the amateur doser. The best tonics are those provided by nature — proper diet, plenty of rest, and outdoor exercise in the fresh air and sunshine. If a medicinal tonic is needed, it should be prescribed by the physician.

Perhaps the most common form of self-prescribed dosing is the use of cathartics. Many persons suffer from chronic constipation chiefly because early in life they got into the habit of taking laxatives. The intestine becomes more and more dependent upon this extra stimulus to bring about a satisfactory bowel movement. Unless diseased, the organs of the body will work properly if given a chance. Help nature to eliminate waste by eating the proper foods, drinking sufficient water, taking daily exercise, and getting into the habit of going to the toilet at the same time every day. The preventive treatment for constipation is given in a later chapter.

REVIEW

1. What can one do to help nature cure disease?
2. How does modern medicine try to prevent disease?
3. What do you think is meant by "a proper use of medicine"?
4. Name some of the medicines which should be included in a home medicine cabinet.

5. Why is it dangerous to take medicine that is not ordered by a doctor?
6. Tell how to give medicine by rectum.
7. Tell how to apply inunctions.
8. Discuss the ways in which medicines are applied to the nose and throat.

SUGGESTED ACTIVITIES

1. Add to your scrapbook any material which is suggested by this chapter.
2. Make out a list of the things in your home medicine cabinet. Bring your list to class and compare it with those of your classmates.
3. Work out together a good arrangement of your classroom medicine cabinet.
4. Practice measuring and pouring medicine.
5. Practice setting a medicine tray.
6. Demonstrate how to serve medicine which contains acid or iron.

CHAPTER IX

TREATMENTS

There are a few standard treatments which are often ordered by physicians. Do you know what some of these are? Have you ever been called upon to give some treatment which you did not know how to give? If so, you will appreciate at once how important it is to learn the technique of these treatments. Indeed, much harm may be done to the patient if treatments are not given properly.

Soapsuds enema. — An injection of fluid into the rectum is called an *enema*. It acts as an irritant, which causes immediate evacuation of the bowels. Enemas are given frequently in certain diseases. The soapsuds enema is the kind most commonly used. Make a soap jelly by pouring boiling water over two or three tablespoonfuls of flaked Ivory or Castile soap and allowing it to boil for three or four minutes. Measure out three or four ounces (about half a glassful) of soap jelly and add enough warm water (98° to 100° F.) to make a quart. Mix well and strain through two thicknesses of gauze (or cheesecloth) into the enema bag. Close the clamp on the tube before pouring the fluid in.

When giving an enema, cover the patient with a bath blanket and turn the bedclothes down to the foot of the bed. Have the patient turn on her left side with both knees drawn up. Place a piece of rubber sheeting, covered by a bath towel, under the patient's hips to protect the bed. Then put the soapsuds solution into the enema bag and smear the nozzle

with vaseline on a piece of toilet paper. Holding the bag in the left hand, cover it with a towel and, taking the covered bedpan in the right hand, go to the sickroom.

Place the bedpan on a chair nearby and let a little of the solution flow into the bedpan in order to drive the air out of the tube and run off the cold fluid. Hold the bag (or hang it up) not more than three feet above the bed. As the patient inserts the nozzle, release the clamp and allow the fluid to flow slowly. Shut it off every minute or so, and wait a few seconds before allowing a little more to flow in. The nozzle should be inserted gently and the injection given slowly.

After the enema is finished, the patient turns on her back and retains the fluid for five minutes, if possible. Be ready to give the bedpan when the patient needs it. (Directions for giving the bedpan will be found in Chapter X.)

After withdrawing the nozzle from the rectum do not put it into the bag. Wash it off with soap and water and boil for three minutes. (Can you tell why?) Dry the bag thoroughly and, if kept in a drawer or on a shelf, place gauze or muslin in it to keep the sides from sticking together. Leave the clamp open and move it occasionally to different places on the tube. Rubber hardens and breaks easily if it is not properly cared for.

Treatment of inflammation.—A bodily injury or a growth of bacteria in tissues may set up a diseased condition called inflammation. In such a condition there is redness, pain, heat, and swelling. Common examples of inflammation are seen in sprains, sore throats, infected wounds, and boils.

Local inflammation, that is, inflammation in one particular place, may be relieved by hot or cold applications or by counterirritants. Before considering the various ways of ap-



EXPELLING AIR FROM A HOT WATER BAG

plying heat and cold, let us review the facts about the effect of heat and cold on the blood vessels. Heat dilates the blood vessels and thus increases the blood supply. Such an increase in the flow of blood to the injured part makes the healing process go on more rapidly. Moist heat softens the tissues and, when used over infected areas, draws the pus nearer to the surface where it can escape more easily. This tends to keep the infection localized, and thus prevent it from spreading over a larger area.

Cold applications act in just the opposite way. They contract the blood vessels and thus lessen the blood supply to the injured part. If the physician thinks it desirable to increase the blood supply in an inflamed area, he will order dry or moist hot applications. If he wishes to decrease the blood supply, he will order dry or moist cold applications.

Methods of applying dry heat.—The most common method of applying dry heat is by use of a hot-water bottle or bag, which is made of rubber or of metal. The rubber bag serves more purposes than the metal bottle because it is light and fits more comfortably against the body.

To fill a hot-water bag, fill a pitcher with hot water and carry it to the bathroom. Fill the bag about two-thirds full. The simplest way to expel the air after the bottle is filled is to lay the bottle down on the flat surface around the washbowl and let the water come to the mouth of the bottle. Be certain that the rubber washer is on the stopper, and then screw it in evenly and tightly. Test the bottle carefully to see that it does not leak. Dry the outside of it and slip it into a hot-water-bag cover. These covers are square flannel bags with tapes run around the top so that they can be drawn up. Hot-water bags should always be covered before applying them to

any part of the body. If necessary, a piece of flannel may be pinned neatly around the bag.

Never pour boiling water into a hot-water bag, and never fill one directly from the teakettle or faucet because you cannot judge how hot the water is. Test the water with a bath thermometer if you have one. Otherwise, use your best judgment in regard to the amount of heat. Remember that a patient may be badly burned by a hot-water bag if it is too hot. On the other hand, a bag which is merely lukewarm will not do the patient any good.

When applying a hot-water bag to the abdomen, do not fill it as full as when applying it to the feet, because the weight is noticeable. It should also be less hot because the skin over the abdomen is more tender than that on the feet.

Everyone who uses a hot-water bag in the home should put it away in good condition. It may be needed in an urgent emergency, and valuable time will be lost if the bag is not found ready. When you have finished using a hot-water bag, empty it and blow air into it to keep the two sides from sticking together. Be certain that the washer is on and screw the stopper on evenly and tightly. Dry the outside of the bag and hang it in the bathroom or keep it in a special drawer or on a shelf where it can be easily found.

Another method of applying dry heat is by the use of electric pads. There are many other substitutes. Hot bricks and flatirons may be used, wrapped in paper and covered with flannel. Fruit jars with covers that screw on securely may be filled with hot water and wrapped with the usual flannel covering. Flannel bags filled with hot salt or hot bran are used satisfactorily. Blankets may be warmed in an oven or over a radiator and used next to the patient under the bedclothes.

Methods of applying moist heat. — *Hot compresses* are used to supply continuous moist heat to small local areas. They may be ordered by the doctor in treating a sty or other infection on the eye. They may be used for boils on the face or neck. The articles necessary for the treatment are:

- 2 small compresses (double thickness of gauze, old linen, or flannel a little larger than the area to be covered)
- A larger dry compress (double thickness of flannel folded larger than the wet compresses)
- A tube of vaseline
- A basin of hot water
- An electric plate
- 2 clamps (to hold and wring out the compresses)

These articles may be kept on a tray for convenience. Attach the electric plate so that it can be placed on the bedside table. Put the two small compresses into the basin of hot water and place the basin on the electric plate. With a small piece of gauze apply vaseline around the infected area in order to protect the skin from the heat. Using the clamps, wring out one of the wet compresses. Unfold it, taking hold of the two upper corners, and place it over the inflamed area. Cover it quickly with the dry compress.

To keep the heat constant, the compresses must be changed every ten or fifteen minutes and the process has to be kept up for a period of two hours or more. The second wet compress must be ready to apply before the first one is removed. If you do not have an electric plate, you will have to carry hot water to the bedside each time you change the compresses. If compresses are being run on both eyes, use separate bowls and separate compresses for each eye so that infection may not be carried from one eye to the other.

Stupes offer a method of applying moist heat to large local areas. A stupe is a pad of thickly folded, soft material wrung out of boiling water and applied to the skin. Stupes are most commonly used on the abdomen to cause the expulsion of gas. The best kind is made of fine flannel filled with lamb's wool and tacked to hold the wool in place. These are not usually on hand in the home, but several thicknesses of flannel or flannelette may be stitched together to be used as a substitute.

When preparing to give stupes, take a face basin and spread a face towel over it. Collect the following articles and place them in the basin, covering them with the end of the towel:

4 safety pins

1 large stupe — to be used as a dry stupe

1 piece of oiled muslin (a protective dressing sold at drug stores) to hold the heat

A double thickness of gauze or soft old linen somewhat larger than the area to be covered

A tube of vaseline

A spatula or piece of gauze for applying the vaseline

A binder (a wide strip of muslin used to hold dressings in place)

2 face towels

Put a kettle of water on to boil and place a face basin in the kitchen with the following articles in it:

Stupe wringer

Stupe poles

2 small stupes

These small stupes should be a little larger than the area to be covered. It is impossible to wring out stupes from



USING A STUPE WRINGER

boiling water by hand, so a stupe wringer is used. This wringer is made of a heavy piece of cloth, such as ticking or heavy toweling, with a wide hem at each end through which

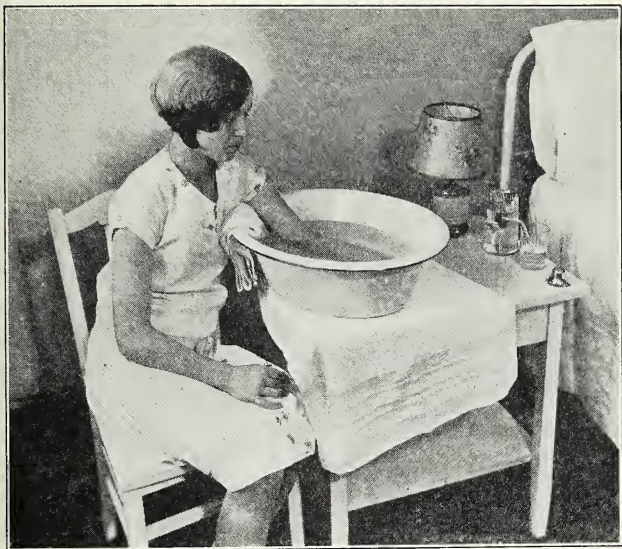
sticks or poles are inserted. By putting the stupes into this cloth and twisting the poles in opposite directions the stupes may be wrung dry easily and comfortably.

When the necessary articles have been collected, carry the first basin to the sickroom and prepare the patient for the treatment. Cover her chest and abdomen with a bath blanket and fold back the bedclothes to the hips. Turn the night clothes back from the abdomen. Fold one towel back over the night clothes and blanket, and another over the bedclothes for protection. Using a spatula or a small piece of gauze, apply a thick coating of vaseline over the abdomen and cover it with the double thickness of gauze. This protects the skin from burns. Place the binder in position under the patient's back. Fold one of the towels back over the abdomen while you go to the kitchen for the hot stupes.

Pour boiling water over the stupe in the basin and wring it as dry as possible. Empty the water, leave the stupe in the wringer and carry it to the bedside in the basin. (Put something under the basin to protect the table.) Turn the towel back from the abdomen and, unwinding the wringer, open the stupe to allow some of the hot steam to escape. Spread it out over the gauze, lifting it once or twice until the patient can endure the heat. Cover it quickly with the oiled muslin and the dry stupe to prevent the escape of heat and moisture. Pin the binder to hold the stupes in place.

Stupes are changed every twenty or thirty minutes, as ordered by the physician, and the treatment is usually carried on for a period of several hours. The second stupe should be at the bedside ready to apply before the first is removed. Stupes must be applied with great care in order to obtain the desired results without burning the skin.

Continuous tubs are used in applying continuous moist heat to the whole body or to a large area such as a hand, foot, leg, or arm. In the home, the latter are commonly ordered in cases of infection to keep the infection localized and to draw



A CONTINUOUS TUB FOR THE LOWER ARM

pus and bacteria nearer to the surface. The articles necessary for the treatment are:

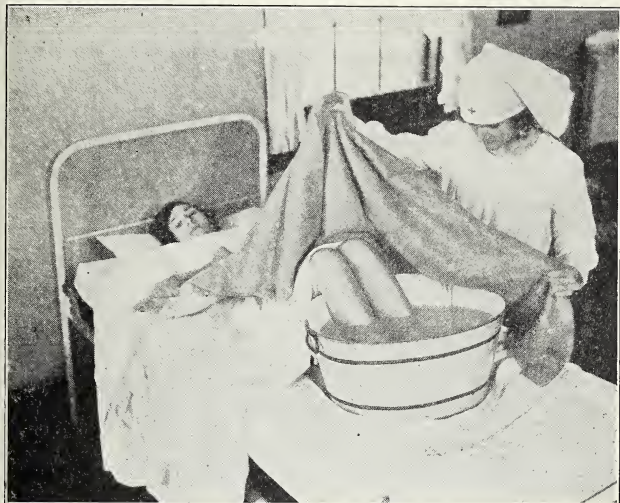
- A tube of lanolin
- A basin or foot tub
- 2 large bath towels
- A piece of rubber sheeting
- A kettle of hot water

Fill the basin or tub two-thirds full of hot water — as hot as the patient can bear it. It is well to start with water about 105° F. and raise it gradually to a higher temperature. For the hand or arm, place the tub on a chair or small table so that the patient can sit in a comfortable position. Protect the chair with rubber sheeting and a towel. Rub the hand and arm with lanolin before putting it into the water. The second towel is folded and used as a pad over the edge of the tub, for the arm to rest upon. The temperature of the water should be kept constant. A salt solution or a boric-acid solution is sometimes used for this treatment. A continuous tub is usually ordered for a period of five or six hours, but two hours may be enough for an infection which is near the surface. The treatment is continued until the desired results are obtained.

A *foot tub* is used to relieve congestion. The heat dilates the blood vessels in the feet and thus draws blood away from congested parts of the body. This treatment is often given to relieve headaches, colds, and insomnia. To receive the full benefit, the patient should be in bed. The temperature of the water is usually from 105° to 115° F. One tablespoonful of mustard to each gallon of water may be used to increase the effect of the heat. Tie the mustard in a muslin bag and drop it into the tub after the patient's feet are in the water. Do not put it in earlier, because mustard loses its effectiveness very quickly. Squeeze the bag occasionally so that the mustard will dissolve thoroughly.

When giving a foot tub, loosen the top bedclothes at the foot of the bed and, folding them back over the patient, cover her feet and legs with a bath blanket folded double. Protect the lower half of the bed with the rubber sheeting and bath

towel. Have the tub half full of water. Place it on the towel and, lifting the patient's feet, lower them slowly into the water. Put a folded bath towel over the edge of the tub to make the legs more comfortable. Fold the bath blanket over the tub and tuck it in closely around the knees. The bedclothes



GIVING A FOOT TUB

are folded down again and the feet are allowed to stay in the tub about twenty minutes. Increase the temperature gradually by adding hotter water. If desired, an ice cap may be placed on the patient's head to reduce the amount of blood. When the treatment is over, remove the tub, dry the feet thoroughly, remove the towel, rubber sheeting, and blanket, and make the bed. Place a hot-water bag at the feet and be sure that your patient is dry and warm.

A *poultice* is a soft, hot, moist paste made from some heat-retaining substance, such as flaxseed or cornmeal. There are also several kinds of clay poultices, such as Antiphlogistin.

Flaxseed makes a very good poultice to use in the home. Provide first a piece of old linen or muslin about two inches wider than the required width of the poultice when finished and about two inches longer than twice the required length when finished. Boil a pint or more of water in a shallow saucepan and, stirring constantly, slowly add enough flaxseed to form a thick porridge. The hot mixture is now spread out quickly about a quarter of an inch thick over half of the muslin, leaving a two-inch space at the edges. Fold up these margins of the cloth over the flaxseed and then fold the other half of the muslin over the top of the poultice and tuck the free edge under. Place the poultice between hot plates to carry to the bedside.

Turn back the bedclothes as far as necessary and, raising the gown, place the binder under the patient. Oil the skin with vaseline and apply the poultice slowly. Cover it with flannel and pin the binder to hold it in place. Remove the poultice before it becomes cool, and apply another at once, if ordered. When the treatment is finished, remove the poultice and dry the skin. If the skin is quite red, rub vaseline or oil over it and place a pad over the area to protect the gown.

Methods of administering cold applications. — Cold applications may be dry or moist. The simplest way of applying dry cold is by use of ice caps. These are rubber bags of various shapes, so made that they can be filled easily with small pieces of ice. Put a piece of ice into a bag or piece of heavy ticking or canvas and break it into small pieces with a hammer. Empty it into a dish and carry it to the bathroom.

Using a spoon, fill the ice cap two-thirds full. Expel the air, be certain that the washer is on the cap, and screw it on evenly and tightly. Test the bag to see that it does not leak. Dry it on the outside and slip it into a muslin or linen cover. If placed over the appendix or abdomen, a binder may be used to hold it in place. Refill when necessary.

It is possible to 'burn' the skin with an ice cap. One should never apply an ice cap without a cover, and should always watch the skin for redness.

An ice cap is cared for in the same way as a hot-water bag. A piece of cloth may be put into the bag to keep the sides from sticking together. Any ice cap will leak unless the washer is on the stopper and is in good condition. Be careful not to apply an ice cap which leaks.

If there is no ice cap in the house a piece of rubber or rubber sheeting makes a good substitute. A rubber apron or bathing cap may be tied into a fairly satisfactory ice bag.

Cold compresses relieve congestion and inflammation. They are commonly used over the forehead and eyes of a patient suffering with headache or high fever. A handkerchief or piece of old linen or muslin is folded to fit the forehead. Two wet compresses are needed, and a towel or several thicknesses of muslin may be used for the dry compress.

Place a folded towel in a basin and put a good-sized piece of ice on it. The towel prevents the ice from clinking against the basin. Wet two compresses and place them on the ice. Carry the basin to the bedside, apply one of the compresses and cover it with the dry one. The object of the treatment is to supply constant cold, and in order to do this, the compresses must be changed regularly every five to ten minutes.

Counterirritants. — Mustard has a counterirritant action, that is, it sets up an irritation which is enough to draw the blood away from the irritation already present in another area. The beneficial action of mustard is reduced if the temperature of the water in which it is dissolved is above 106° F. When added to a hot foot tub (just before it is given) mustard has a slight counterirritant effect for a short time, thus increasing the effect of the heat.

Mustard plasters are sometimes ordered by the doctor. They must be mixed with water which is merely lukewarm, because the oil which produces the irritant effect is lost in hot water. To prepare a mustard plaster, take one part of mustard to three parts of flour and add enough lukewarm water to make a thin paste. The water should be added slowly so that the mixture will be free from lumps. Spread the paste a quarter of an inch thick on old linen or muslin, and fold as directed for flaxseed poultices. Lubricate the skin with vaseline before applying the plaster, and use a binder to hold it in place.

REVIEW

1. Describe the method of preparing a soapsuds enema. What would you do to get the patient ready for the treatment? What position should she be in?
2. How should the rubber enema bag and tube be cared for? Why?
3. What do we mean by inflammation? What are the signs of inflammation?
4. What effect does heat have on the blood vessels? Cold?
5. How would you protect the skin from burns when applying heat or cold?

6. How would you protect the patient from exposure and chilling while giving a treatment?
7. What danger should always be guarded against in applying hot-water bottles and ice caps?
8. Why should compresses be changed regularly every fifteen or twenty minutes?
9. Why are stupes applied over the abdomen?
10. For what reasons is the foot tub given?
11. Why are the poultices used? What are they made of?
12. If you were asked to apply dry cold to an area, what would you use?
13. When are cold compresses used?
14. What is a counterirritant? When is it used?

SUGGESTED ACTIVITIES

1. Demonstrate the method of filling a hot-water bag.
2. Demonstrate how to prepare for applying hot compresses.
3. Collect the articles needed for applying stupes. Demonstrate how to prepare the patient. Tell how stupes are applied.
4. Demonstrate how to give a continuous tub to the hand or foot.
5. Demonstrate how to prepare and to give a foot tub.
6. Show how to fill an ice cap.
7. Practice applying cold compresses.

CHAPTER X

ROUTINE

What does the word 'routine' mean to you?

What are the advantages of working in a routine way?

Why are such methods especially important in taking care of the sick?

The home attendant. — It is easy to see that there must be a definite program in the sickroom if the patient is to be cared for effectively. Certain routine care is needed every day and one particular person should be responsible for it. You can imagine what confusion and countless mistakes may occur if several persons try to carry on the routine of a sickroom. One person should take charge and, if she needs help, other members of the family can coöperate by working under her direction. A course in home nursing should fit one to act as home attendant.

When serving as an attendant, be scrupulously clean in your personal appearance. Wear a wash dress and change it as often as necessary. When bathing a patient, wear a bath apron to protect your clothes. It is unnecessary to roll the sleeves above the elbows when giving a bath or treatment. Rolled-up sleeves look untidy and are often offensive to people of delicate taste. The sleeves may be pulled back from the wrists and, if the work is done carefully, the cuffs will not be soiled. Always be fully dressed when on duty, and avoid appearing in bedroom slippers or with clothing unfastened. Remember that even the slightest thing may be magnified in the eyes of a person who has nothing to do but

lie in bed. Rubber-heeled shoes enable one to move about quietly. Avoid wearing any kind of jewelry except a watch. Rings and bracelets are in the way. A wrist watch may be broken while making the bed if one is not careful. The finger nails must be kept short so that they will not scratch the patient while bathing and massaging her. The hair should be neat and covered with a hair net.

The duties of the home attendant.—The attendant should make a daily program and follow it carefully. This has to be made in accordance with the doctor's orders and it should fit in with the regular household schedule. The attendant sees the doctor when he calls, reports to him the patient's condition, and writes down whatever new orders are given. She sees that all necessary equipment is on hand and that the selection and arrangement of the room is satisfactory.

One duty which calls for considerable tact and firmness is that of protecting the patient from fatigue. Well-meaning friends and relatives often overtax a person who is ill. Anybody who annoys or irritates the patient should be kept out of the sickroom. The attendant must not allow too many visitors to see the patient, and no one should stay more than twenty or thirty minutes. Not more than two or three persons should be permitted in the sickroom at one time, because the confusion is too trying for the patient. Late morning or late afternoon are the best times for visiting. Only members of the family should be with the patient after supper. Visitors may excite her and make it difficult for her to get to sleep early. Remember that a person who is ill tires easily and needs a great deal of extra sleep. These things may seem small, but they are really very important in saving the patient's strength and thereby helping her to get well more

quickly. The whole program of the sickroom should be the responsibility of the attendant in charge, under the direction of the physician.

The daily program. — This will vary slightly in different homes and with different persons. In making out your program, consider the patient's condition, her preferences, and the regular household schedule. Meals, medicines, and treatments must be given on time. Temperature, pulse, and respiration must be taken and recorded regularly. The attendant's work is easier if it is done systematically, and the patient is more comfortable and contented. Here is an example of a good daily program for the sickroom:

A. M.

- 8:00 Take and record temperature, pulse, and respiration
- 8:10 Prepare the patient for breakfast
- 8:30 Serve breakfast
- 9:30 Morning care
- 10:00 Clean room, arrange flowers, etc.
- 10:30 Give intermediate nourishment
- 11:00 Visiting hour (depending upon the condition of the patient, the doctor's orders, and the attendant's judgment)

P. M.

- 12:00 Take and record temperature, pulse, and respiration
- 12:45 Give bedpan (The bedpan is also given as part of preparation for breakfast, morning care, preparation for supper, and evening care.)
- 1:00 Serve dinner
- 1:30 Rest period (sleep, if possible)
- 3:00 Visiting hour (out of doors, if advisable)
- 4:00 Take and record temperature, pulse, and respiration

- 4:15 Give intermediate nourishment
- 6:00 Prepare patient for supper
- 6:30 Serve supper
- 8:00 Take and record temperature, pulse, and respiration
- 8:30 Evening care

Keeping records. — You can be a great help to the doctor by keeping an accurate, continuous record of all medicines, treatments, nourishment, fluids, symptoms, complaints, and reactions. He will be helped by knowing what you have noticed in regard to the patient's behavior. Remember that the physician wants the attendant to report *facts*, and *not* her personal *opinion* of the case.

A notebook ruled off and marked with the proper headings is very satisfactory to use for making the doctor's record. Special record forms can be bought. The record is always kept outside the sickroom. It should not be seen by the patient and its contents should not be discussed before her, because she is likely to think too much about her ailments. If you ask the doctor to write his orders in the back of the record book, you will have them in a safe place for reference.

Preparing the patient for breakfast. — Be bright and cheerful when you enter the sickroom in the morning. Ask your patient how she slept and find out how she is feeling. Open the shades and tidy the room. Then take and record the temperature, pulse, and respiration. Make a record also of the patient's condition. If she cannot go to the bathroom, give her the bedpan before you get her ready for breakfast.

To prepare the patient for breakfast, bring in the articles needed for toothbrushing and do what is necessary to help the patient brush her teeth and rinse her mouth. Then bring in

EXAMPLE OF A PARTIAL DAY'S RECORD

DATE _____

TIME	TEMP.	PULSE	RESP.	FLUIDS	NOURISH- MENT	MEDI- CINES	TREAT- MENT	URINE	BOWEL MOVE- MENT	REMARKS
8 A. M. 8:15	98 ⁴	76	20	Water, 1 glass				+		Patient slept well all night. Seems cheer- ful and com- fortable.
8:30				Coffee, 1 glass Orange- juice, 1 glass Cream Water, 1 glass	Soft- solid diet	Prescr. #48210 tsp. 1				Ate a good breakfast. Appetite good.
9:00									1	Small, brown, well-formed stool. Morn- ing care given.
10:30				Milk, 1 glass	Crackers					
11:00				Water, 1 glass				+		
12:00	99 ⁶	86	20	Water, $\frac{1}{2}$ glass		Prescr. #48210 tsp. 1				
1 P. M.				Iced tea, 1 glass	Soft- solid diet					Appetite fair.
1:30 2:45										Slept one hour. Complains of abdominal discomfort.
3:00							Soap- suds enema		$\frac{E}{1}$	Enema expelled with large, dark brown, soft stool. Patient feels more comfor- table.

* The sign in the urine column means that the patient has voided a normal amount.

the face basin, soap, face towel, and face cloth, and wash her face and hands. If she is able to sit up, the back rest may be arranged and the bed tray put in place so that the patient can brush her teeth and wash herself without further assistance.

After the washing articles are carried away, her hair is brushed, the bedclothes arranged, and the patient put into a comfortable position for eating breakfast. Give her a pitcher of fresh water and see that she drinks one or two glasses. If the patient is lying on a back rest, the bed tray may be left on the bed and used for serving breakfast. When you have to feed the patient, clear off the bedside table so that you will have a place to set the tray. If you have the morning paper, let her look at it while you are getting her breakfast.

Morning care. — After breakfast the patient may rest quietly or read the paper for thirty minutes or so. In sickness, as in health, it is important to have a bowel movement at a regular time every morning. The most convenient and most satisfactory time for this is shortly after breakfast before the daily bath. If the attendant sees to it that the patient has proper food and sufficient water, this habit is rather easily established.

The most satisfactory bedpan for general use is one of white enamel and of the shape called "Perfection." It comes in three sizes — small, large, and medium. Porcelain bedpans are easily broken and are more difficult to keep clean. The bedpan should be kept in a definite place in the bathroom.

Proper elimination is as essential to the patient's comfort and recovery as is proper food or any other element of good nursing care. The attendant should be able to give the bedpan without making the patient feel uncomfortable or embarrassed. A patient appreciates having an attendant give the bedpan with the same cheerful, professional manner that accompanies other kinds of service in the sickroom.

Always warm the bedpan by running hot water over it. Then wipe it off with a towel kept in the bathroom for that

purpose, and cover it with a bedpan cover. A square of double-thick muslin, a folded bath towel, a piece of rubber sheeting, or several thicknesses of newspaper may be used. The bedpan should never be carried to or from the sickroom without being covered.

Before giving the bedpan, cover the patient with a bath blanket and fold the covers to the foot of the bed. Slip a piece of rubber sheeting, covered with a towel, under the patient's hips lengthwise. Ask the patient to bend her knees and lift her hips. The attendant can give a little support by placing her left hand under the patient's hips and back as she slides the bedpan under and adjusts it comfortably. If a patient is extremely weak it may be necessary for two persons to lift her. Most patients can use the bedpan more easily when they are supported by a back rest or seated in a reclining position on pillows.

Before the bedpan is removed, the patient may be cleaned by using a little lukewarm water. Remove the pan, cover it at once, and set it on a chair. Have the patient turn on her side facing you and use absorbent cotton to make her perfectly clean and dry. A large brown paper bag may be kept in the bathroom and carried to the sickroom with the bedpan to hold the soiled cotton. This should be emptied once or twice a day and replaced with a fresh bag when necessary. The bedpan and the bag are carried to the bathroom as soon as the patient is comfortably arranged in bed.

Notice the content of the bedpan, pour a little cold water into it, and empty it into the toilet. Rinse it first with cold and then with hot water before using a deodorant solution such as lysol. A brush with a handle is helpful to use in washing the pan with soap and water. This should be done

at least once a day. There is no excuse for neglecting to clean a bedpan each time it is used. It should be kept as clean and free from odors as is the bathroom.

After finishing with the bedpan the routine morning care consists of the daily bath, making the bed, and cleaning the room. These have been considered in previous chapters.

Preparing the patient for supper. — Never bring a tray to the patient until you are sure that she is comfortable and ready for her food. A thoughtful attendant tries to anticipate the patient's needs and give, without being asked, the attentions which add to her mental and bodily comfort.

Give the bedpan half an hour or so before supper time. Tidy the room and see that the patient is in a comfortable position for eating. It will refresh her to have her face and hands washed at this time. She may also like to brush her teeth.

Evening care. — The evening should be kept free from excitement. When it is about time for the patient to be left alone for the night, the attendant should try to encourage sleep as she gives the routine evening care. Complete relaxation, physical comfort, quietness, and darkness are great aids in helping one to sleep.

Cover the patient with the bath blanket and turn the covers down to the foot of the bed. Let the patient use the bedpan and then brush her teeth and wash herself. If desirable, her hair may be combed and her nightgown changed. In summer when a patient has a high temperature, a sponge bath is welcome. The water pitcher should be refilled and left within easy reach for the night. A whisk broom or folded towel should be used to free the bed of any crumbs which may be found under the covers. Loosen the rubber sheet and

the draw sheet on one side. Pull them tight and tuck them in securely. Remove all the pillows but one, and see that the remaining one is fluffed up and arranged to suit the patient. Have her turn on her side facing you and, using rubbing alcohol and talcum, give a five- or ten-minute back rub (see Chapter V). Avoid conversation and have the room as dimly lighted as possible. When you have finished, draw the gown down smoothly, arrange the bedclothes, and remove the bath blanket.

Open the windows quietly and draw the shades as low as possible. Arrange the screen, if needed. See that the hand bell is within easy reach of the patient, turn out the light, and slip quietly from the room.

The readiness with which a patient goes to sleep depends largely upon the way in which the attendant plans and carries out her evening care. System, quietness, and forethought are needed. Any possible annoyance from heat, light, or noise must be eliminated. The room must, of course, be properly ventilated.

Medicines and nourishment of any kind should be given before the attendant begins the evening care. Warm drinks or foot tubs to help induce sleep should be given just before the back rub. Do not wake the patient for treatment or medicine unless the doctor so orders.

Night care. — The home patient is usually suffering from a minor illness or convalescing from an operation. In either case, she will probably sleep well. If she needs only occasional attention at night, a hand bell or an electric buzzer can be used to call the attendant. The room occupied by the attendant will be next to that of the patient or at least on the same floor. A hand bell is easily heard if the doors are left

open. An electric buzzer can be connected between any two rooms.

When the patient requires constant attention at night or is seriously ill and needs to be watched, there must be two attendants, one for the day and the other for the night. The night attendant must be wide awake and alert. She must sleep seven or eight hours a day and take regular outdoor exercise to keep herself in good condition for her night work.

No one person should give both day and night care to a patient who is ill enough to require considerable attention through the night. There is sometimes a temptation to overdo when a member of the family is ill. An attendant may overtax her strength for a few days, perhaps, without undue injury to herself, but if the illness is of long duration, she will do more for the patient in the end by saving her own strength and health. No matter how urgent the case may seem, one must remember that if the attendant herself becomes ill as a result of overwork the situation is worse than it was in the first place.

REVIEW

1. Answer the questions at the beginning of this chapter.
2. In what ways can an attendant make her appearance attractive to the patient? Why is this important?
3. What is the duty of the home attendant in regard to visitors?
4. What things do you have to consider when you are planning a daily program?
5. Why is it important to keep a record of what you do for the patient and what you notice in regard to her condition?
6. How would you prepare a patient for breakfast?
7. What is done in giving morning care?
8. How would you prepare a patient for supper?

9. What is included in the evening care?
10. What things can be done to help a patient go to sleep quickly?
11. What arrangements should be made when a patient requires considerable care during the night? Why is this important?

SUGGESTED ACTIVITIES

1. Add to your scrapbook any illustrations which are suggested by this chapter.
2. Rule a paper and write in the headings for a record sheet.
3. Demonstrate how to give a bedpan.
4. Demonstrate how to prepare a patient for breakfast.
5. Demonstrate how to give evening care.

CHAPTER XI

HOME CARE IN MINOR ILLNESS

Almost everyone occasionally suffers from some slight ailment which is very uncomfortable but which does not seem serious enough to call for a doctor's attention. What to do in such an illness must often be decided by the mother or some member of the family who has had training in home nursing. You can easily see that it is safer to reach such a decision through knowledge and training rather than through intuition or guesswork. There is a distinct advantage in knowing what can be done to relieve the discomfort of a patient suffering from a temporary minor illness. Few of us can afford to call a doctor for every slight ailment. Indeed, it is usually unnecessary to call the physician for these minor illnesses if you know the cause.

Judgment and discretion must be used, of course, and if the discomfort seems unusually acute or continues over a long time, the physician should be called. The home attendant should not attempt to treat a disease which may be of a serious nature, but her nursing knowledge will help in any kind of illness. No matter how excellent the physician's treatments may be during his brief visits, the patient is not likely to get on rapidly unless some member of the family knows how to give the necessary nursing care. A course in home nursing should give enough knowledge and confidence so that one will be able to act wisely in matters of illness, and distinguish between the minor conditions and those which demand the physician's skilled attention.

Headache. — Although headache is only a symptom and not a disease in itself, it may be very disturbing. Acute and persistent headaches indicate trouble somewhere in the body. The cause of the trouble must be discovered and treated. Among the different disorders which may cause severe headache are constipation, indigestion, eyestrain, fatigue, and acute infections. Most of these causes may be avoided by healthful habits of living.

An enema gives the quickest relief for a headache caused by acute constipation. Cold compresses applied to the forehead and eyes or hot foot tubs will often relieve the severity of a headache. (Can you tell why?) Massage applied at the base of the head and neck helps to relieve tension and congestion. An ice cap may be used on the forehead or at the base of the neck. It is well to remember that overheated, poorly ventilated rooms often cause headache, and that cool, fresh air is essential in treating the ailment.

Nausea and vomiting. — A common form of nausea and vomiting is that which is caused directly by indigestion due to spoiled food. When one has eaten food which makes him sick, vomiting relieves the discomfort more quickly than anything else. Mustard in warm water is often given to produce vomiting when an immediate emptying of the stomach seems advisable. Drinking two or three pints of hot water also aids in washing out the stomach to obtain quick relief. A disturbance of this kind should be followed by a good cathartic, such as castor oil or Epsom salts.

Nausea caused by nervousness or fatigue may be relieved by lying down in a cool, quiet room with an ice cap or cold compress over the forehead. Soda mints or a teaspoonful of sodium bicarbonate in a glass of water may be taken.

After a severe attack of nausea and vomiting one should be very careful about eating for a day or two. Simple foods are best — preferably carbohydrates, taken in small quantities five or six times a day, eaten slowly, and chewed thoroughly. Such food requires little activity on the part of the stomach and gives it a chance to rest. Fresh air and rest are also important factors in the treatment.

Indigestion and colic. — Colic is a name given to acute pain in the stomach or intestines. The pain is due to distention or to spasmodic muscular contractions. It may be caused by unsuitable food, food eaten too rapidly, fatigue, excitement, constipation, or a marked chilling of the surface of the body. The best way to avoid colic is to avoid these conditions which are likely to cause it.

When an attack of colic occurs it may often be relieved by taking a teaspoonful of sodium bicarbonate in a glass of hot water. A few drops of essence of peppermint in hot water or a soda mint may lessen the pain. An experienced person can give a high warm enema, which relieves the distention.

Definite types of severe colic often accompany certain diseases, and these types are recognized by the doctor. Marked abdominal colic which localizes in the right side is one of the chief symptoms of appendicitis. There are, however, many cases of acute and chronic appendicitis where the colic remains general over the entire abdomen and may easily be mistaken for cramps of indigestion. If there is the slightest possibility that colic may be a symptom of appendicitis, call the physician at once, and give no food or medicine except under his direction. Apply an ice cap to the right side while waiting for the doctor. Repeated attacks of abdominal cramps, accompanied by nausea and vomiting, fever, or con-

stipation, should always have the prompt attention of an expert physician.

Chills. — A chill may be the first symptom of a communicable disease or of an infection in the body. The patient's temperature should be taken and, if there is a fever accompanied by other obvious symptoms, the physician should be called.

To give immediate relief, put the patient in bed and get her thoroughly warmed. Warm a blanket and place it next to her body. Put hot-water bottles at her feet and on either side. A hot drink is beneficial.

When one feels chilled and tired after an unavoidable exposure or a nervous upset, a hot tub bath may be taken before getting into bed.

Diarrhea. — When bowel movements are too frequent and too soft we say the person has diarrhea. It is frequently caused by unripe or overripe fruit, or by food which is unsuited or spoiled. It is sometimes caused by nervous conditions. Many infectious diseases are accompanied by diarrhea and, if the onset is sudden, there will usually be colic and vomiting also.

Diarrhea is always a symptom that something is wrong. The patient should be put to bed and no food given except boiled milk and boiled water. Since diarrhea is so often caused by some irritating substance in the bowels, a cathartic is needed; castor oil is very good. Unless the cause can be traced directly to food or nervousness, a physician should see the patient.

Constipation. — Food is moved through the intestines by muscular contractions of the intestinal wall. This wavelike contraction is known as *peristalsis*. When the peristaltic ac-

tion is weak, or when for some other reason the elimination of waste material is slow and abnormal, the person is said to be constipated. Headaches, loss of appetite, lassitude, and mental depression are common symptoms.

The most frequent causes of constipation are (1) improper food, (2) insufficient water, (3) lack of exercise, and (4) carelessness in habit training. Constipation can be overcome by developing wholesome habits of living which will help the intestine to function normally.

The constant use of a diet made up chiefly of refined, starchy foods is sure to result in constipation. A good diet should contain a large amount of coarse material which gives bulk to the food as it passes through the intestine and stimulates peristalsis. A diet which includes fibrous foods, foods containing organic acids, and foods rich in fat, will help to keep the intestinal tract clean and healthy.

A special diet for constipation should contain an abundance of the following foods:

A. Fibrous foods

1. Coarse, whole-grain cereals (wheat, corn, rye, oats)
2. Dark, whole-grain breads (bran muffins, graham bread, Boston brown bread)
3. Fresh vegetables (spinach, chard, cabbage, beet-greens, turnips, parsnips, peas, beans, carrots, cauliflower)
4. Fruits (apples, grapes, prunes, raisins, figs)

B. Foods containing organic acids

1. Fruits (oranges, lemons, grapefruit, apples, all berries except blackberries)

C. Foods rich in fats

1. Butter

2. Cream
3. Fat of meat
4. Salad oils

A sufficient quantity of water is a great aid in the elimination of waste. Drink at least six or eight glasses a day. One or two glasses of water before breakfast will wash out the in-

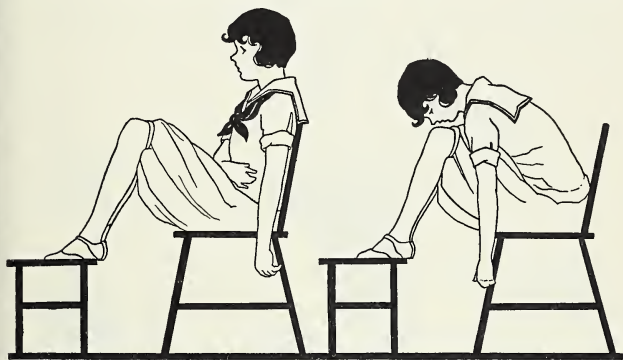


EXERCISE 1

testinal tract and help one to establish the habit of having a bowel movement every morning shortly after breakfast.

Diet alone will not cure a stubborn, chronic case of constipation. Exercise of the abdominal muscles is perhaps as important as diet. Such exercise is found naturally in all the vigorous activities of the outdoor world and the gymnasium — in walking, swimming, tennis, basketball, horseback riding, snowshoeing, skating, or skiing. Persons of a generation ago had much abdominal exercise in their various forms of active work as well as in their play. Now that condi-

tions of living have changed so much, many of us get little or no vigorous exercise in the course of our daily work. Only by doing special exercises can some persons get the abdominal exercise which our forefathers got naturally through their work and play. The following simple exercises for the abdominal muscles can be used by a well person to prevent



EXERCISE 2

or overcome constipation. (A person who is ill should follow the doctor's advice in regard to exercise, as in other things.)

1. Lie flat on the back with hands at the sides. Bend first the left knee to the chest and then the right knee. Be sure to pull the knee tightly against the chest so that the leg presses on the lower abdomen. Repeat from ten to thirty times.
Lying in the same position, bend both knees to the chest. Repeat from five to ten times.
2. Sit on a chair with the feet slightly elevated, as when resting on a stool or the rungs of the chair. Place the right arm

across the lower abdomen. Bend the trunk forward, pressing the arm against the abdomen. Repeat from ten to fifteen times.



EXERCISE 3

3. Stand with the feet about three feet apart, and raise the arms sideways. Bend the trunk forward (keeping the knees straight) and touch the floor in front of the right toe with the left hand. Raise the trunk. Bend forward again, touching the floor in front of the left toe with the right hand. Alternate ten to twenty times.
4. Lie flat on the face, with the forehead resting on the hands. Draw both knees up, taking the knee-chest position. Push

the left leg back as far as possible and return to position. Repeat with the right leg. Alternate ten to thirty times.

Lack of habit-training is a very common cause of constipation. In the rush of modern life many persons do not take time to establish regular habits of elimination. Definite



EXERCISE 4

times in the day are set aside for eating, working, and sleeping. A convenient time should be selected for the daily bowel movement and one should train oneself to attend to this matter regularly. A satisfactory time for most persons is shortly after breakfast.

Chronic constipation of long duration may be so serious that it needs special medical attention. There are some cases which demand surgical treatment because of a definite obstruction in the intestine. Except in such extreme cases, constipation can usually be cured by a *persistent* daily routine, as recommended in the following suggestions:

1. Drink two or more glasses of water on arising.
2. Take fifteen or twenty minutes of exercise involving trunk muscles (unless for some particular reason such exercises are forbidden by a physician).
3. Eat fresh fruit, whole-grain cereal, and whole-grain bread (with plenty of butter) at breakfast.
4. Go to the toilet at the same time every day shortly after breakfast and make a conscious effort to have a bowel movement. If unsuccessful, do nothing about it, but try again at the same time the following morning. If unsuccessful on the second morning, take a small soapsuds enema. (Suppositories may be used.) Follow this routine on alternate days until you have trained yourself to respond naturally at that definite time. Meanwhile pay strict attention to your food, amount of water, and exercise. The combination will eventually bring success.
5. Include an abundance of fresh fruit, vegetables, and whole-grain foods in the diet at every meal.
6. Drink at least six to eight glasses of water during the day.

If these daily practices do not bring the desired results, the two following items may be added to the routine:

1. One teaspoonful of agar-agar may be taken three times a day with meals. (Agar-agar is a Japanese seaweed which adds bulk to the diet.)
2. One tablespoonful of mineral oil may be taken at bedtime.

The routine must be followed *regularly* until the habit is well established. Avoid laxatives. If the constipation persists in spite of long, careful routine treatment, one should consult a physician.

REVIEW

1. What is meant by minor illnesses? What things would you consider in deciding what to do about them? What should be done if they persist over a long period of time?
2. Discuss the various causes of headache, and the methods of relieving it.
3. Tell what to do to relieve nausea and vomiting. How would you feed a person after this kind of illness?
4. What would you do to relieve chills?
5. What is colic? How can it be avoided? How can it be relieved?
6. If a person had severe colic which was chiefly in the right side of the abdomen, what would you do? Why?
7. What are common causes of diarrhea? How would you treat it?
8. What foods help to prevent or cure constipation?
9. Outline the routine treatment for constipation.

SUGGESTED ACTIVITIES

1. Add illustrations to your scrapbook to show the foods which help to prevent or cure constipation and the forms of vigorous exercise which are helpful.
2. Demonstrate the exercises suggested in the chapter.
3. Rule a paper with spaces in which you can keep for the next two weeks your own daily record of the habits which help to prevent constipation. Discuss these habits in class and decide which ones will be listed on your record. Train yourself to go to the toilet at the same time every day.

CHAPTER XII

INFECTIONS AND ANTISEPSIS

If you have ever had an infection in your finger or some other part of the body, you know how painful and troublesome such a thing can be. Perhaps someone whom you know has had an infection which developed into blood poisoning. If so, you realize how dangerous infections are.

An infection is caused by harmful bacteria which get into the tissues of the body and grow there. The word may be applied not only to such a condition as an infected finger, but also to certain diseases.

During the past three generations the treatment of disease has become a science. Pasteur, through his long, patient studies upon the nature of harmful bacteria, discovered important facts which began our control over the infectious diseases.

As you know, most bacteria are harmless. Some are even helpful. The flavor of butter and of certain kinds of cheese is due to the presence of special kinds of bacteria. Vinegar is made by the action of acetic-acid bacteria growing in apple juice. Buttermilk and various sour-milk drinks are produced by lactic-acid bacteria.

Certain kinds of bacteria can live and grow within the human body without doing any harm. There are, however, some bacteria which are injurious to the body. We have now learned to wage a successful war against these. Science teaches us the nature of bacteria and how to attack them.

Bacteria increase rapidly in number under conditions of

warmth, darkness, and moisture. They are killed by extreme heat, as in boiling, or by exposure to direct sunlight. Dryness also kills many forms of germ life.

Disease-producing bacteria came from the bodies of people (or animals) who have the disease. They are spread in many ways: through direct contact, through contact with clothing carrying the bacteria, on particles of dust, and in food which has been carelessly handled.

Sterilization. — By *sterilization* is meant the process of destroying *all forms* of microbial life in or on an object. *Disinfection* is the process of destroying all *infectious* organisms. Since many harmless bacteria are more resistant than the ordinary disease-producing organisms, perfect disinfection may often be secured without actual sterilization. The word *sterilize* is commonly used to apply to this condition, however, and the word is used in this generally accepted sense in the following pages.

Heat is the surest and quickest method of sterilization. In the home this is commonly accomplished by boiling a substance for twenty minutes. In hospitals, steam sterilizers are used. Towels, sheets, absorbent cotton, and all materials used for operations are subjected to steam under fifteen pounds' pressure for thirty minutes. Sterile cotton and sterile gauze to use over wounds may be bought in sealed packages.

Chemical substances may also be used to destroy bacteria. These are called *disinfectants* or *antiseptics*. Their use and action is varied. When used on the skin and in wounds they retard or prevent the growth of bacteria, but they do not sterilize.

Handling sterile materials. — Once a material is sterile, it can be kept sterile only by avoiding contact with everything

which is not free from bacteria. The best way to handle sterile goods is to use clamps or forceps which have been sterilized and are kept in an antiseptic solution in a jar which has been boiled. Tweezers or pincers may be boiled and used in the same manner. In opening a package of sterile gauze



CUTTING STERILE GAUZE

or cotton, be careful not to touch the inside of the cloth or paper in which the material is wrapped. To cut off a piece of sterile gauze, unfold the package without touching the gauze or the inside of the package. Take hold of the outside of the end piece without touching any other part of it and, unrolling it a little, cut off the length needed to cover the wound. Such material would not be considered sterile but it would be clean and reasonably free from bacteria, and is perfectly safe to use on the ordinary wound. Sterile gauze applied to a wound is spoken of as a *sterile dressing*.

The hands should be washed thoroughly with soap and

water before handling sterile material. Even then, the hands are not sterile and every part of the material which is touched by the hands is no longer absolutely free from bacteria.

Wounds. — Any break in the skin is called a wound. It may be a cut, bruise, incision, puncture, ruptured blister, or any other injury which breaks the continuity of the skin. One of the functions of the skin is to act as a covering for the body to protect the tissues from infection. A wound furnishes a place of entrance for bacteria. For this reason, even a slight wound should be cared for at once. Serious results may occur from so small a wound as a pin prick.

Many types of wounds are treated in the home. They must be cleaned properly and protected from infection. Two things have to be considered in the treatment of a wound — infection and hemorrhage. In most wounds the bleeding is slight, but there is always danger of infection no matter how slight the wound may be. Let us consider here only the precautions which must be taken to prevent infection. Later we will consider how to control bleeding.

To prevent the development of bacteria in a wound, an antiseptic is applied. Apply this liquid over the wound and over the skin immediately around it, using a wad of sterile absorbent cotton or a toothpick swab. (Clean absorbent cotton folded over and rolled around the flat end of a toothpick is called a toothpick swab.) Cut a piece of sterile gauze, as instructed (p. 132), and place the gauze with the sterile side down over the wound. Then apply a bandage to hold the dressing in place. Such a sterile dressing keeps the wound clean while the tissues heal. A dressing applied with pressure tends also to prevent further bleeding. After the wound is bandaged, the injured part should be kept in a comfortable position. An

injured hand or forearm may be placed in a sling; a leg may be supported on a pillow or a folded blanket.

A dressing is changed as often as necessary. If it has stuck to the wound, loosen it by pouring a little warm sterile water over it. Ether will loosen adhesive tape and the soiled dressing. Never touch a wound with your hands. The wound may be cleaned and the dried blood washed away by using a wad of sterile cotton with alcohol or ether. Warm sterile water containing a little lysol may be used for this purpose. When the wound is clean, apply a fresh sterile dressing and a clean bandage. Never remove a bandage or a dressing that a doctor has put on (unless he tells you to do so), but go back to him to have it changed.

Patent salves, powdered iodoform, or unboiled water should never be used on a wound. Handkerchiefs, soiled cloths, or towels should not be used for bandages or dressings. Use only sterile cotton or gauze. If a deep injury has been made by a rusty nail or a dirty instrument, cover the wound at once with sterile gauze and have the doctor see it. Clean cotton or cloth wound around the end of a match or toothpick makes a good applicator for applying iodine. Many of the bottles have a glass rod applicator attached to the stopper.

It is well to let a dirty wound or a deep wound bleed rather freely for several minutes before applying the antiseptic and sterile dressing. The blood flushes out some of the dirt and bacteria, thereby lessening the danger of infection.

If a wound has occurred in such a way that it is full of sand and dirt, make a weak suds of clean soap and sterile water. Dip a wad of absorbent cotton into the suds without putting your fingers into it and squeeze the solution over the wounded surface. Do not pat or rub the wound. Warm sterile water

with a little lysol may be used for this purpose. When the wound is clean, apply the antiseptic and sterile dressing in the usual way.

Iodine is an excellent antiseptic to use on a wound, but certain precautions must be observed in its use. Tincture of iodine has a high percentage of alcohol, which evaporates readily and leaves a strong solution that is likely to cause a burn. Iodine should always be kept tightly stoppered with a glass or rubber stopper so that it will not evaporate too fast. Alcohol can be added to dilute it if it becomes too strong. Iodine should never be poured into a wound, but should be applied lightly with sterile cotton or a toothpick swab. Never cover a wound with a dressing until the iodine is dry, because wet iodine is likely to burn the tissues.

Boric-acid powder is used to make a mild antiseptic solution especially suitable for the eye and for flushing out wounds. Put two teaspoonfuls of the powder into a sterile jar or bottle and add one pint of sterile water.

Here is a list of useful antiseptics for the home medicine cabinet:

Alcohol	Tincture of iodine or iodine
Boric-acid solution	swabs
Ether	Green soap (a liquid, antiseptic
Lysol	soap)

Infected wounds. — A wound becomes infected when bacteria gain entrance and develop. The symptoms are redness, swelling, and pain.

Two things must be done to prevent the development of blood poisoning from an infected wound: (1) the infection

must be kept localized, and (2) the infection must be drawn to a head or opened so that the bacteria and pus can escape. An ordinary wound can usually be drawn to a head by applying moist heat. If the injury is on the hand, forearm, foot, or lower leg, a continuous hot tub affords the most effective means of treatment. Hot compresses may be applied to an infection on the eyelid or to an infected pimple or boil on the face, neck, or back. Remember that the application of heat must be *constant* until the wound is soft enough to rupture easily. Once it is drawn to a white or yellow head, a sterile needle may be used to open it at that point. After thoroughly squeezing out the pus, wash the wound with an antiseptic and apply a sterile dressing and bandage. Boric-acid solution is particularly soothing to use for this purpose.

If the pain and swelling continue, a doctor should be consulted. If the wound is quite deep, or if there are the slightest signs of red lines, or if the patient has a fever, the physician must be called. There should never be a delay in calling a doctor in such a case, for one's condition may become critical within a few hours if an infection is neglected.

Slight and superficial infections may be successfully handled by a trained person in the home who fully recognizes the importance of immediate and thorough treatment. If it is impossible to draw an infected wound to a head and open it within three or four hours, take no chances. Call a competent physician.

REVIEW

1. What causes an infection?
2. What is a wound? Why should any wound be cared for at once?

3. Why would you allow a deep wound to bleed rather freely for a few minutes?
4. Tell how to treat a dirty wound.
5. Name some useful antiseptics for the home medicine cabinet.
6. Tell how to treat an infected wound.

SUGGESTED ACTIVITIES

1. Demonstrate how to open a package of sterile gauze.
2. Demonstrate how to apply a sterile dressing.
3. Demonstrate how to change dressings.
4. Practice making toothpick swabs.
5. Find out what antiseptics are kept in your home and compare the list with the one given in this chapter.

CHAPTER XIII

THE CONTROL OF COMMUNICABLE DISEASE

There are two kinds of diseases. The first group includes the communicable diseases which are caused by living parasites that get into the body. The second group is made up of those diseases which occur when something goes wrong in the body mechanism itself. Public health and personal hygiene help us to *prevent* most of these diseases, and modern scientific medicine helps us to cure many of them. Our knowledge of the true causes of disease has removed much of the fear, anxiety, and worry which former generations have felt. We are learning how to live in order to keep well.

There are four important procedures in keeping well: (1) the development of healthful habits of living in everyday life, (2) regular physical examinations, health advice, and treatment by scientific physicians, (3) immunization against certain diseases, and (4) the maintenance of healthful living conditions.

Control of communicable disease. — The most important item in the control of communicable disease is the work of the Health Department. Many diseases are controlled through the sanitation of water, milk, and food supplies. Malaria and yellow fever can be overcome through mosquito control.

One problem of the Health Department is to control carriers of disease. A *disease carrier* is a person who carries the germs of a communicable disease without being sick himself. Usually this happens because the person has had the disease

in such a mild form that it was not recognized or, having been known to have had the disease, he still carries the germs in his body. He may transfer these germs to other persons. Typhoid, dysentery, diphtheria, and septic sore throat are sometimes spread in this way.

Protection against certain diseases is given through a process of *immunization*. One usually does not have measles more than once. This is also true of many other diseases. A person who cannot catch a disease is said to be *immune* to it. One becomes immune to a disease by having had it or by being immunized against it.

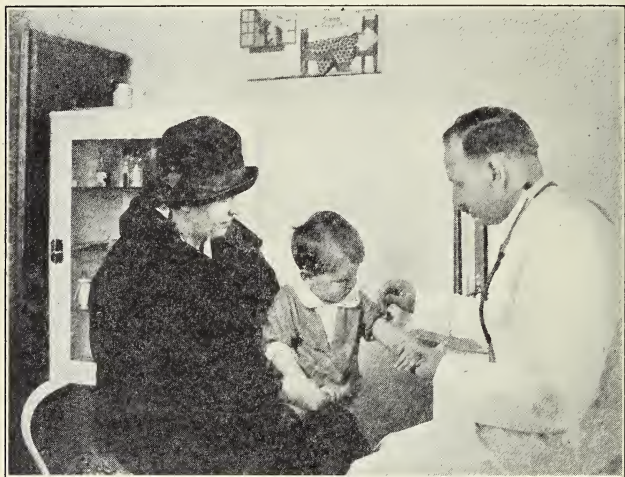
How is immunity produced? When germs get into the body and cause disease, there is a battle between the germs and the body. The germs produce substances which injure the body, and the body produces substances which kill the germs. If the body produces enough of the right kind of substance, the germs are killed and some of this protecting substance stays in the body and prevents the person from taking the disease again.

All immunization is based upon this principle. In vaccination and other forms of immunization, weakened or killed germs are introduced into the skin. They cause only slight discomfort, but they enable the body to produce the desired protecting substances.

The principle may be illustrated by using diphtheria as an example. The diphtheria germ produces toxin and the body produces antitoxin. The antitoxin is found in the clear fluid (serum) of the blood. The antitoxin which the doctor uses in curing diphtheria is made in the blood of the horse and injected into the body to help one resist the toxin of diphtheria.

There are two diseases which could be completely wiped

out by immunization. These are smallpox and diphtheria. Smallpox is prevented by vaccination, and diphtheria by the injection of toxin-antitoxin or of toxoid. (The Schick test which is often used is an injection of a test solution into the skin to find out whether one is already immune to diphtheria.



LITTLE CHILDREN SHOULD BE VACCINATED AGAINST
SMALLPOX AND IMMUNIZED AGAINST DIPHTHERIA

(Reproduced by courtesy of Milbank Memorial Fund)

It does not immunize one, but is merely a test to find out whether the body already has enough protective substance to prevent the disease.)

Health Departments also protect persons through *quarantine* and *isolation*. When a person has been exposed to a communicable disease he may be quarantined. The word 'quar-

antine' comes from the Italian word meaning 'forty,' and refers to the fact that the ships of long ago were kept in the harbor for forty days before any of their passengers were allowed to land whenever there had been cases of communicable disease on board during the voyage. The Board of Health quarantines a person who has been exposed to a communicable disease by keeping him away from others.

Isolation means keeping by oneself. When a person actually has a communicable disease, everyone except the attendant is kept away from the sickroom. It is a part of good citizenship to respect the rules of quarantine and isolation.

Whenever a case of communicable disease occurs, it must be reported to the Health Department at once. The patient is isolated and those who have already been exposed are quarantined, unless they are known to be immune to the disease.

Caring for the isolated patient. — In preparing a room for a patient with a communicable disease, clear everything from the room except the articles needed for the comfort of the patient. Pictures and draperies should be taken down. Books and bric-a-brac of every kind should be removed. Keep in mind that when the patient gets well everything which is left in the room will have to be boiled, burned, or scrubbed with soap and water or a disinfectant. Windows should be screened and the room kept well ventilated. Fresh air and sunshine are especially important. Remember that bacteria develop rapidly in dark, damp places. Select a bright, airy room on the sunny side of the house for the isolated patient.

It is desirable to have a private bath which is used by no other member of the family but belongs exclusively to the

patient and attendant. If such an arrangement is impossible, keep the toilet articles, bath basin, and bedpan on a table in the sickroom or in the bathroom. Water can be carried into the room when needed and, if the proper precautions are taken, the bedpan can be kept and cared for in the bathroom without danger to other members of the family.

All urine and stools must be disinfected before emptying into the toilet. The physician in charge will advise as to what disinfectant shall be used. Cover the content of the bedpan with the disinfectant and let it sit as long as ordered before emptying it.

Isolation technique. — The home attendant must observe the correct isolation technique in order to keep the disease from spreading. Keep a large, loose apron on the back of a chair just inside the sickroom door. When you come into the room slip into this apron, being careful to touch only the clean inner side of the garment. This protects your clothes while you are caring for the patient. When removing the apron, remember that your hands are now contaminated and you must therefore be careful to touch only the outside of the apron and fold it so that the inner side will be kept free from germs.

A mask, or mouthpiece, may be worn over the nose and mouth for protection. This consists of a double thickness of cheesecloth or gauze made into an oblong which completely covers the mouth and nostrils. A tape is sewed on each end to tie around the head. There must be a good supply of these masks so that the attendant can use a fresh one each time she enters the isolated room. Boil the masks after using them.

Such a mouthpiece may be used to protect the attendant

from the patient and, in some cases, to protect the patient from the attendant. If an attendant should contract a cold while caring for a patient, the latter may be kept from contracting the cold if the attendant wears a mouthpiece. A tight-fitting cap may be worn over the hair in the isolated sickroom.

The hands are perhaps the chief means of transmitting disease from one person to another. The attendant must scrub her hands thoroughly with soap, brush, and hot water after touching the patient or anything which has come directly or indirectly in contact with the patient. The physician may order a special antiseptic solution in which the attendant soaks her hands each time she leaves the isolated room. The solution is prepared fresh every morning and kept in a basin in the bathroom or just outside the sickroom. The attendant must keep her hands away from her face while with the patient. Linen and contaminated articles should be held away from the body so that only the hands come in contact with infected material. The patient must be careful not to cough or sneeze on the attendant.

Bed linen should be carried in a pillowcase from the room and dropped on a piece of paper just outside the door. After removing her apron and mouthpiece and disinfecting her hands, the attendant rolls the linen in the paper and carries it to the laundry or kitchen where it is dropped into a boiler of hot water. Cover it and boil for twenty or thirty minutes. Burn the paper. Boiling destroys the germs so that the linen is now safe to send to a laundry or to wash in the usual way. Stained or bloody linen should be put on to boil in cold water and then boiled twenty minutes. (Can you tell why cold water is used in such a case?)

Gauze may be used in place of handkerchiefs and burned.

Small cardboard boxes or boxes of papier-mâché may be used as sputum receptacles and burned. Sputum can be received in toilet tissues and deposited in a paper bag pinned to one side of the bed.

Certain dishes should be selected for isolation and kept for the exclusive use of the patient during illness. After each meal the dishes should be put in a basin of cold water and boiled for twenty minutes. Any particles of food left on the dishes should be burned or boiled with the dishes before disposal in the garbage.

At the end of the isolation period everything in the room must be boiled, burned, or disinfected. The mattress and pillows are brushed off with a strong solution of lysol and exposed to the sun and air for a day or two. The woodwork, floors, and furniture are gone over with an antiseptic solution or soap and water. Dishes, basins, linen, etc., are boiled. Papers, books, and medicines are burned.

The prevention and care of colds. — Each person must be responsible for maintaining his own health. In some diseases, as we have seen, immunization is a safeguard, but the chief protection against colds and tuberculosis is found in the health of the individual. For this reason, these two diseases deserve special attention. It is easy for germs to enter the air passages of the nose or throat, where they find conditions favorable for growth. Some of the germs which cause common cold may live in the air passages even when one is well. Moreover, there are so many different kinds and they are so widely spread from the noses and throats of those having colds, that it is almost impossible for one to escape them entirely. Once within the respiratory tract, they await a chance to grow. A chilling of the surface of the body, fa-

tigue, or any condition which lowers general bodily resistance may furnish the opportunity for these organisms of common cold to develop. Then one suddenly realizes that he is coming down with a cold.

One of the most important things to know about colds is how to prevent them. First of all, keep yourself in the best possible health by practicing reasonable habits of living. Have an annual physical examination and keep yourself free from physical defects which interfere with your health and make you susceptible to infections. Maintain the tone of your skin and mucous membranes by stimulating your circulation through the use of a cold-water bath or rough towel and through daily outdoor exercise. See that you have proper daily elimination. Live in well-ventilated rooms and have your windows open at night. Avoid wearing heavy wraps indoors during cold weather and put them on when you go out. Keep away from persons who have colds. Be clean in your personal habits and train yourself to keep your hands away from your nose and mouth, thereby avoiding direct infection.

Sometimes one catches cold in spite of all he can do. It is extremely important to try to break up a cold in the very early stages. A hot tub bath helps to relieve the congestion by drawing the blood to the skin. If a tub bath is impossible, a foot tub may be substituted. In either case, one should go to bed promptly and get thoroughly warm. A warm blanket may be placed next to the body, and hot-water bottles may be put at the foot and at either side of the bed. A hot drink is helpful.

Such an infection must be carried off in the wastes of the body, and it is therefore desirable to increase the elimination. One should drink at least a glass of water every hour during

the day until the cold is considerably better. A teaspoonful of sodium bicarbonate in a glass of hot water three or four times a day is sometimes recommended. A mild cathartic is thought to be helpful if the patient is constipated. Use a liquid diet, including a generous amount of fruit juices.

Perhaps the most important step is to go to bed promptly and stay there until the fever has been absent for twenty-four hours. Rest and warmth will give the body a chance to overcome the invading germs. If one fails to give the body favorable conditions for the fight, the attack of the disease is likely to gain headway, causing serious illness.

Whenever a cold is unusually severe or is accompanied by other symptoms such as fever, nausea and vomiting, or colic, the family physician should be called at once. A cold which does not clear up quickly should also be referred to the doctor for advice and treatment.

Care should be taken to prevent the spread of colds through the family. The person who has a cold should protect others by covering his nose and mouth when he coughs or sneezes. He must avoid spreading the infection through handling food or using personal articles belonging to others. If gauze is used instead of handkerchiefs, it can be burned. If handkerchiefs are used, they should be laundered separately, boiled, and dried in the sunlight. Can you tell why?

Tuberculosis. — When the tubercle bacillus gets into the body, it usually chooses to live in the delicate tissues of the lungs. The connective tissue cells, with the aid of the white blood cells, surround the troublesome invader. They build a tight wall about the bacilli and imprison them. This little ball-like prison is called a *tubercle*. Hence the names *tubercle bacillus* and *tuberculosis*.

People who are in good health do not need to worry about contracting tuberculosis because their bodies are able to do the walling-off process so quickly. Indeed, a few of the tubercle bacilli have come to many of us, but the cells of our bodies have walled them off without our knowing anything about it.

Tuberculosis is prevented chiefly by good habits of living. Proper food is needed so that the cells of the body may be well nourished. A good amount of sleep and rest is as important as food, because the vitality of the body cells is lowered when one is fatigued. Scientists have learned that fresh air and sunlight help the body to resist tuberculosis.

These considerations of food, sleep, and outdoor life are particularly important for children and for girls in the period of adolescence. During this period of rapid development there is an unusually heavy demand upon all the body processes. A girl must have good habits of eating, sleeping, and exercising if she is to build a strong, beautiful body and maintain her defence against disease.

One serious difficulty for the adolescent girl is the temptation to overdo with social life and special activities outside of school. Many girls rob themselves of good looks, health, and happiness during this important period because they are unwise in their habits of living. Every girl wants to have a good time, but the one who gets enough sleep, eats the proper foods, and enjoys outdoor life will have the most fun in the end.

Another serious danger that has appeared during recent years is the mania for excessive thinness. Some girls are foolish enough to go without proper food and sleep in order to be thin. They do not realize that they are fighting against

nature itself, and that the whole body must suffer with the abuse which is inflicted upon it. The intelligent girl is willing to accept her own natural type of figure, and knows that by the practice of reasonable habits of living she is paving the way to years of health and happiness.

Although health is the chief protection against tuberculosis, it is important, of course, to avoid infection. This can be done by establishing those habits of cleanliness which will prevent the bacilli from entering the body, and by avoiding direct contact with the disease. The bacilli are given off in the sputum of persons who have tuberculosis.

Tuberculosis is cured by the same means by which it is prevented — by proper food, sleep and rest, fresh air, and sunlight. The outlook is now very hopeful for cases which are discovered in the early stages. This is another reason why people should go to their doctors for regular yearly physical examinations. In such an examination the existence of tuberculosis can be discovered before the disease is far advanced, and its development can be stopped by proper treatment. Once the disease has established itself, a great deal of lung tissue may be destroyed, and then the cure is not so easy.

Tuberculosis is best cared for in a sanitarium, where the patient receives the simple, everyday care which enables the body to make a fight against the disease. The same methods could be used in the home if the patient would follow the doctor's directions and take the precautions necessary to protect other members of the family.

In caring for a case of tuberculosis, the attendant takes every precaution not to infect herself. Things used by the patient are used by no one else. Everything coming in contact with the sputum is either sterilized or burned. The attendant is especially careful about the cleanliness of her

hands, in order to avoid carrying infection from hands to mouth.

REVIEW

1. What four important procedures in keeping well are mentioned at the beginning of this chapter?
2. What things are done by the Health Department to control disease?
3. What are 'disease carriers' and why are they dangerous?
4. What is meant by being immune to a disease? What two diseases could be wiped out by immunization? Have you been immunized against these two diseases?
5. If you had to care for an isolated patient, what things would you consider in selecting the room and preparing it for the patient?
6. What should be done with the body discharges of an isolated patient?
7. Tell some of the important points in isolation technique.
8. How would you clean the room when the isolation period is over?
9. How can colds be prevented?
10. When you feel a cold coming on, what things can you do to break it up?
11. What is the best way to establish protection against tuberculosis?

SUGGESTED ACTIVITIES

1. Add to your scrapbook pictures to illustrate (1) the activities of the Health Department in controlling disease, and (2) the habits which help one to avoid colds.
2. List on the board the names of all those in the class who have been (1) vaccinated against smallpox, and (2) immunized against diphtheria.

3. Select the room in your house which you would choose for an isolated patient, and make a list of the changes you would make in preparing the room for the patient.
4. Demonstrate how to use an apron when caring for an isolated patient.
5. Demonstrate how to remove linen from the isolated room.

CHAPTER XIV

CONVALESCENCE

If you have ever had a serious illness, you realize how long it takes to regain one's strength. This period necessary for recovery following an illness is spoken of as the convalescent period. The disease has been overcome, but the patient's vitality is low, the muscles are weak, digestion is feeble, and the nervous system is unstable. Good nursing at this time is of greatest importance in helping the patient to make a speedy and satisfactory recovery. There should be an agreeable, cheerful atmosphere in the convalescent's room. The attendant needs to be extremely tactful and to show sympathy and understanding without being too indulgent.

The desirable environment for regaining health. — The surroundings of the convalescent should be stimulating without being too fatiguing. Fresh air and sunshine are especially helpful. Get the patient out of doors as much as possible. If there is a piazza opening off the sickroom, the patient may be moved out in her bed once or twice every day. The late morning and early afternoon are the best times for exposure to sunlight. The season of the year, the patient's condition, and her preferences must be considered in giving the outdoor treatment. Be careful to protect the patient from chilling. In the winter, late fall, or early spring, extra covers and a hot-water bottle may be needed. The bedclothes should be tucked under tightly on both sides. The patient should wear a bathrobe or coat; she may also need stockings and gloves. Pro-



GETTING THE PATIENT UP FOR THE FIRST TIME

tect her head in whatever way seems best. Place the bed directly in the sun if possible.

As the patient's condition improves, the doctor will order the attendant to get her up in a chair. Somewhat later, she will be able to sit in a chair on the piazza or on the lawn. Re-



MAKING THE PATIENT COMFORTABLE IN A CHAIR

member that it is quite an undertaking for the patient to sit up for the first time following a long illness, and that the attendant must be very careful. Usually the patient dangles her legs once or twice a day before attempting to sit up in a

chair. This means that she hangs her legs over the edge of the bed or places her feet on a chair beside the bed, to increase the circulation in her feet and legs.

When you are ready to get the patient up in a chair, select a comfortable arm chair and place it quite near the bed. Pillows may be placed so that they will support the back and arms, if necessary. When the weather is cool, arrange a blanket in the chair so that it can be folded over the patient's feet and legs. If the bed is high, place a footstool for the patient to step on. Help her into her bathrobe and put on her stockings and slippers. When you have assisted her to a sitting position, she can move over to the edge of the bed. With your arm around her as a support, she can slide off the bed to the footstool and then, stepping down, turn, and sit in the chair.

The first period of sitting up should be not longer than fifteen minutes. The attendant must watch the patient to see that she is not dizzy or too tired. Some patients fatigue so quickly that they may faint when they first get up and, for this reason, the attendant should not leave the room.

This is a favorable time for the long-needed turning of the mattress. Arrange to have the patient up after a rest period following the bath. Then the bed can be stripped, the mattress turned, and the bed remade during the fifteen-minute period.

The time of sitting up is gradually increased and, after the first day, the patient may get up in the afternoon as well as in the morning. As soon as the patient is able to walk about, let her sit in another room on the same floor. The change is restful and pleasant. Let her go out of doors as soon as possible.

Each stage of the convalescent period must proceed slowly. The patient needs long hours of sleep and must have enough activity to induce sleep and relaxation. Let her do as much as she can for herself. Activity strengthens her muscles and gives her something to think about. Guard her, however, from undue fatigue.

The daily routine must be followed with clocklike regularity. Meals must be served on time. Make the trays as attractive and tempting as possible. Food is increased gradually, of course, and the patient must be persuaded to eat the expected amount at each meal. Remember that food and rest are the most important factors in helping her to regain her normal strength.

An energetic patient may attempt to take up her regular work before she is physically able to do so. Such a person must be watched and persuaded to let her work alone until her strength is fully restored. Good coöperation between the patient and attendant will speed the recovery. The attendant must provide favorable conditions for progress, and the patient must make a brave attempt to do her part by proper attitudes in regard to sleeping, eating, resting, and avoiding fatigue.

Mental problems of convalescence. — Illness, especially if of long duration, produces a mental change in the average person. The patient is likely to be depressed, irritable, and unreasonable in her demands. She may cry easily, become unduly excited over little things, or be stubborn in regard to some unimportant detail. Her interests and activities have become so limited that she is bored with everything and is discouraged by her physical weakness and her emotional instability. The attendant must try to understand how the

patient feels and give her the encouragement and confidence which will bring her back to a normal state of mind.

The adult patient has already established her habits of meeting problems in life. Her behavior during illness is usually very much like her everyday behavior when she is well. However weak and childish she may seem, remember that you cannot change her habits while she is ill. If she has a calm disposition, is accustomed to facing her troubles squarely, and endures quietly whatever she must, she will progress rapidly. On the other hand, if she is a selfish person who has never been able to work out her own problems or to accept personal responsibilities, she will show in illness the same lack of courage and endurance. Her convalescent period will be a difficult one. Such a person requires constant encouragement, protection from unnecessary annoyance, and indulgence in her special whims. She cannot stand the strain of illness alone.

However unreasonable and trying such a patient may be, the attendant must control her own feelings and be kind but firm in carrying out the necessary daily routine. Such behavior has to be accepted as a part of the patient's illness. Avoid things which especially annoy the patient and make her feel that you will gladly do anything which adds to her comfort. Make no attempt to point out her weaknesses or to discipline her in regard to them. Be as optimistic and reassuring as you can. Remember that cheerfulness is contagious.

Many patients dwell upon their illness and find it hard to turn their thoughts away from themselves to normal outside interests in life. The attendant and other members of the family can do much to stimulate the patient's interest in things outside of the sickroom. Avoid talking about the patient

and her illness. Direct her thoughts toward other things. Read the newspaper to her and discuss topics of current interest. Avoid depressing or exciting items. Good novels or interesting detective stories are stimulating at this time. Some patients are entertained by card games or puzzles.

Occupational therapy. — During recent years the doctors have learned the value of treating the mind as well as the body. When the patient's strength begins to return, the right amount of purposeful occupation is very helpful. It stimulates her interest and occupies her time and thought. The practice of using various occupations in treating illness is known as occupational therapy. This is used chiefly with patients who have a long period of convalescence or who are suffering from a chronic illness.

In selecting an occupation, one must consider the patient's physical condition, age, tastes, and mental ability. Her interest will be increased if the attendant or some member of the family shares the activity or does a similar piece of work. Another method of increasing interest is to change the occupation frequently. The period of work should be limited in order to avoid fatigue. Praise the work and give constant encouragement. Remember that in occupational therapy poor work is better than none. The effort and interest of the patient are the things that count. The type of work should be changed and the length of time increased as the patient gains in strength.

Many kinds of occupations are used with the home patient. Knitting, crocheting, and needlework of all kinds are among those most commonly employed. Weaving, stenciling, book-binding, basketry, clay modelling, leather work, and metal work may be used. Children enjoy scrapbook making, stamp

collecting, paper folding, paper cutting, painting, dressmaking for dolls, and other such forms of child occupations.

The chronic patient. — A chronic illness is one that is continuous over a long period of time. Rheumatism and certain forms of kidney trouble are types of chronic disease. The principles of nursing are always the same whether the patient is convalescing from an acute illness or is suffering from a chronic disease. The patient must be kept clean, comfortable, and as contented as possible while being provided with whatever special treatment the case demands. In chronic cases, special care must be taken to prevent bedsores and bed weariness. For this reason, alcohol rubs are usually given several times a day.

The attendant must show courage and ingenuity in trying to keep the chronic patient comfortable and contented. Help her to accept the situation as it is and make the best of it. Give her a chance to feel useful by allowing her to do whatever odd jobs she can, and be sure to express your appreciation for what she does. It is extremely important for the patient to cultivate outside interests by *doing* things and by thinking about something besides her own condition. Only a person of strong character can face long months or years of illness with courage and a sportsmanlike spirit. Probably nothing helps the chronic patient so much as the companionship of a person who can wisely and sympathetically help her to endure the difficulties of her situation.

Nursing care for the aged. — In old age there is a general slowing down of all activities. The organs of the body do not function as vigorously as in the earlier years. A person has less resistance, has poorer muscle tone, and is more easily fatigued. The mind is less alert. Elderly persons require

more sleep and less food. When ill, they need a great deal of gentle nursing. Remember that aged persons have poor circulation and are extremely sensitive to cold. Protect them from drafts and exposure of all kinds. Provide light woolen covers and warm night clothes. Use hot-water bottles, being careful to guard against burns.

Aged patients are especially susceptible to bedsores. Take every preventive measure possible. Insist upon changing the position frequently. Keep them as active as you can. Give oil rubs and alcohol rubs several times a day.

REVIEW

1. If you were caring for a convalescent patient, what kind of surroundings would you try to provide for her?
2. What precautions would you take when getting the patient up for the first time?
3. What are the important points in the daily routine of a convalescent patient?
4. Describe the methods of protecting a patient from chilling when out of doors in bed.
5. Why does the convalescent have mental problems? What could you do to help her return to a normal state of mind?
6. What is occupational therapy? Name several kinds of occupations used. What things would you consider in selecting an occupation for a patient?
7. What is meant by a 'chronic patient'? What things have to be especially considered in caring for such a patient?
8. What special precautions need to be taken in caring for an aged patient?

SUGGESTED ACTIVITIES

1. Add to your scrapbook illustrations showing (1) the use of outdoor treatment, and (2) occupations which may be used for occupational therapy.
2. Demonstrate how to get a patient up in a chair.
3. If there is a sanitarium nearby, plan to visit it and see what the patients do. (You may like to write to some sanitarium for a booklet describing the care given to their patients.)

CHAPTER XV

FIRST AID

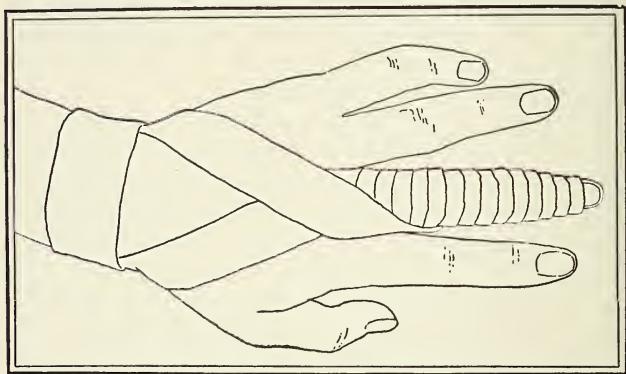
Everyone is called upon occasionally to give first aid in an emergency. Did you ever try to put a bandage around the elbow or the knee and find that you could not make it stay in place? Do you know how to adjust a sling so that it gives comfortable support to an injured arm?

Bandages. — In order to become skillful in applying bandages and dressings, one must develop the proper technique in handling the *roller bandage*, because this is accepted as the basis of all kinds of bandaging. It can be applied in various ways to meet different requirements. Roller bandages of muslin or gauze can be purchased at any drug store. For general use, they come in a variety of widths from one to four inches. In length, they are from three to ten yards. The one-inch roller bandage is used on the fingers or toes. The inch-and-a-half or two-inch is generally used on the palm of the hand. The two-and-a-half and three-inch are applied to the arms and head. The three-and-a-half and four-inch are used on the legs.

The gauze bandage is used to hold soft dressings in place. The muslin bandage is used to give support or pressure and to hold splints or a fracture dressing.

In each individual case, one must use judgment in determining how to apply the bandage and in estimating how much tension should be used. A bandage may be applied tightly, moderately, or loosely. If it is too tight, it will interfere

with circulation and cause throbbing. If it is too loose, it will fail to hold the dressing in place. Usually a roller bandage is applied with moderate pressure so that it gives a support similar to that of a comfortably fitting glove. The greater the circumference of the part, the more force must be used in applying a roller bandage. On the leg, for example, each succeeding turn must be made somewhat firmer than the



A SPIRAL BANDAGE

preceding one. The turns around the thigh require considerably more force than those at the ankle if the bandage is to give equal support to each part.

For home emergencies one needs to know only three or four of the simplest methods of applying the roller bandage. These simple methods and their combinations are used for all parts of the body.

The end of the bandage is held in place by making two or three turns at the starting point. Hold the loose end of the

bandage with the thumb and index finger of the left hand. With the roller held in the right hand make two or three turns toward the right. This *initial turn* holds the end of the bandage so that it will not slip.



SPIRAL BANDAGE APPLIED WITHOUT REVERSE
(Reproduced from Hopkins's *The Roller Bandage*, by courtesy of
J. B. Lippincott Company)



SPIRAL REVERSE SHOWING THE POINT AT WHICH
REVERSING BEGINS

(Reproduced from Hopkins's *The Roller Bandage*,
by courtesy of J. B. Lippincott Company)

A *circular bandage* consists of a series of three circular turns which repeat each other exactly. It is commonly used over the eye or the forehead.

A *spiral bandage* makes a series of ascending or descending

circular turns in which each turn overlaps half or two-thirds of the width of the preceding one. Spirals are applied over the long bones, as for example on the arms and legs.

The *spiral reverse* is used over the changing contour of the arm or leg to make a smooth bandage, free from puckering.



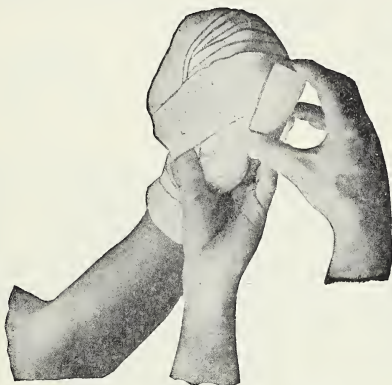
FIGURE-EIGHT USED AT THE ELBOW

(Reproduced from Hopkins's *The Roller Bandage*, by courtesy of J. B. Lippincott Company)

Reverse the roller, or turn the edge back on itself, so as to make an inverted V.

A *figure-eight* is used at the joints — elbow, knee, ankle, or palm of hand. The bandage is applied so that the bend of the joint forms the crossing part (or middle) of the figure-eight while the loops are made above and below the joint.

A *recurrent bandage* is made by catching a turn at some point and turning it back upon itself so that it exactly retraces its course. It may partly overlap and change its direction slightly. This is commonly applied to the head, foot, and hand.



MAKING RECURRENT TURNS

(Reproduced from Hopkins's *The Roller Bandage*, by courtesy of J. B. Lippincott Company)

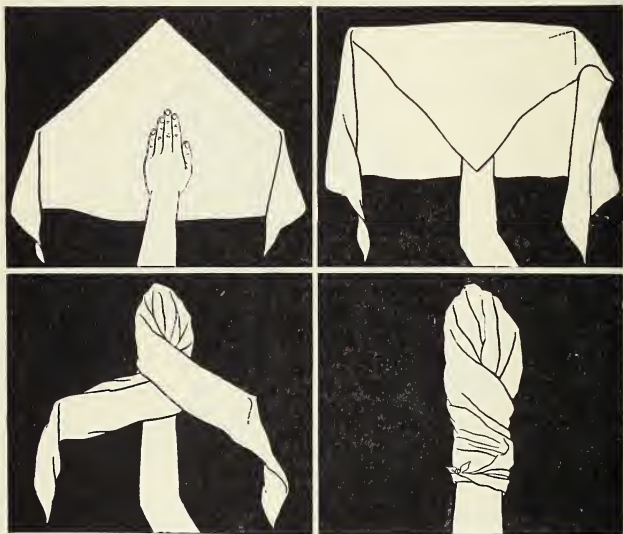
There are several good ways to fasten the end of a roller bandage. One way is to split it into two tails which may be carried around in opposite directions and tied. The edge may be folded under neatly and secured with a piece of adhesive tape or pinned with a small safety pin.

When removing a roller bandage, gather it up closely as you unwind it and pass it from hand to hand. No loops or ends should be allowed to trail.

To reroll a bandage, use a pencil. Wind one end of the bandage securely on the pencil and, with the left hand guiding

the course of the bandage, turn the pencil with the right hand. Soiled bandages should not be used again unless they are washed, boiled, and rerolled. Can you tell why?

Probably no other bandage can serve so many purposes in



APPLYING THE TRIANGLE BANDAGE TO THE HAND

emergency cases as the *triangle bandage*. It is made by cutting a piece of cloth a yard square into two pieces diagonally. It can be used as a sling or applied to hold temporary dressings to almost any part of the body. It also makes a convenient tourniquet for controlling bleeding.

By drawing the point down to the long edge and then folding it over two or three times, you can make the triangle into

a broad or a narrow bandage and use it on the forehead, side of the head, eye, cheek, leg, or arm. In using the narrow bandage, place its center over the dressing, then carry the ends around and tie them. These ends should be tied in a reef knot (square knot) to avoid slipping.

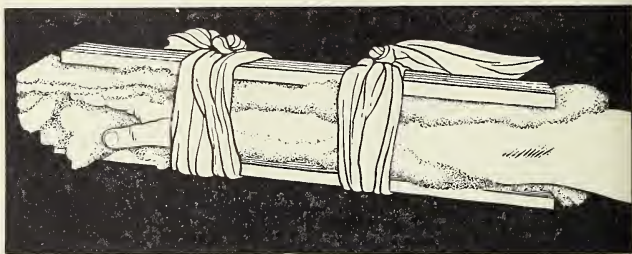


APPLYING A SLING

To apply a large arm *sling*, spread out the triangular bandage so that the point of the triangle is behind the elbow of the injured arm. Put one end up over the opposite shoulder and let the other hang down in front of the chest. Bend the injured arm forward over the middle of the bandage, then lift the other end of the bandage up over the shoulder on the injured side, and tie the ends at one side of the neck. Fold the point in neatly and pin with a small safety pin.

Small arm slings may be made by folding two triangular bandages into the narrow form. The ends are tied together and placed around the neck so as to make two loops. One loop supports the forearm and the other supports the hand.

Two handkerchiefs or small triangular bandages may be used to support the hand in a sling. Fold one handkerchief into a narrow bandage and place it around the neck with the loose ends in front. Fold the second handkerchief into a broad bandage and tie it to the one around the neck.



A SPLINT

Sprains. — A sprain results from twisting or tearing the ligaments of a joint. It is usually caused by a sudden twist, turn, or fall. A few small blood vessels may rupture and produce a little internal bleeding. This causes considerable swelling and pain which may be relieved by applications of heat or cold or by alternating hot and cold applications. Raise the injured part to lessen the amount of blood. Prevent any motion of the joint. A sprained arm or wrist is supported by a sling. When an ankle, knee, or hip is sprained, the patient is not allowed to walk. Support is given by putting a pillow or pad under the foot or knee.

A splint and bandage may be used to prevent motion. Take a straight piece of wood and, after padding it with cotton, use a roller bandage to hold the cotton in place. Put this under the injured joint so that it extends several inches on either side. Bandage or tie it in place. If the injured joint is in the arm, use a sling.

When a sprain seems unusually severe or there is any reason to suspect that there may be a fracture, send for the doctor.

Strains. — A strain is a wrenching or tearing of the muscle itself. It may be caused by an injury or by overexertion of the muscle. Complete rest is essential. Apply a firm bandage and use a splint if necessary. Applications of heat or cold and the use of light massage will hasten the recovery.

The control of bleeding. — When severe bleeding accompanies a wound it should be checked immediately before the wound is cleaned or dressed. There are three types of bleeding — capillary, arterial, and venous.

Capillary bleeding occurs with nearly every type of small wound. Blood from a capillary may be dark or bright red. It oozes slowly from the wound and in general is easily controlled. Usually the pressure of the dressing and bandage will stop the blood. Cold water or a piece of ice will help. Sometimes exposure to air for a few minutes will cause the clotting of the blood which is necessary to check the bleeding. If this form of bleeding continues for a long time, it may be serious.

Slow bleeding from the socket of a tooth can be controlled by packing the cavity with cotton or gauze. The patient should lie down and have an ice cap applied to that side of the face.

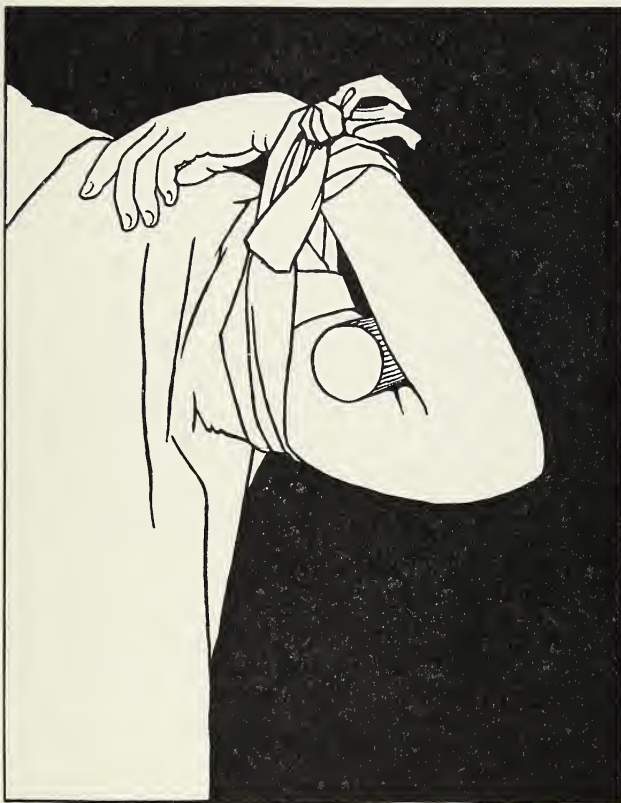
Arterial bleeding is always extremely serious and may be

even fatal. A person can bleed to death in a very few minutes. Arterial blood flows from an artery in spurts with each beat of the heart. Its color is bright scarlet. Pressure must be applied to the bleeding point at once. Cover your finger with several thicknesses of gauze and make direct pressure on the wound until a pressure pad of sterile cotton can be substituted. It is desirable, as quickly as possible, to produce pressure *between the wound and the heart* to control the bleeding.

Pressure can be applied by the fingers or the heel of the hand over the artery between the wound and the heart. If it is difficult to maintain the pressure with the hand and if the bleeding is from an arm or leg, a tourniquet may be applied *above* the wound. To make a tourniquet, wrap a roll of bandage, or some other firm pad, in a triangular bandage, or a scarf. Place the pad on the inner arm or leg above the wound, and tie two loose knots with the ends of the bandage. Slip a stick between these knots and twist the bandage until the pressure against the artery shuts off the flow of blood. A tourniquet *must be loosened at least every fifteen or twenty minutes* to allow the circulation to return.

An ice cap may be applied over or above the wound. Raise the injured area. Send for a doctor as quickly as possible. In cases of accident and severe injury, a bleeding wound should be controlled before any other first-aid measure is given.

Venous bleeding is slightly less serious than arterial bleeding, but it demands immediate attention. The blood in the veins is dark red and flows in a steady stream toward the heart. As venous blood comes from a wound it is dark in color and flows freely and steadily. The principles of control are the



CONTROLLING BLEEDING IN THE FOREARM

same as for arterial bleeding, except that pressure must be made *below* the bleeding point, *between the wound and the extremity*. Cover the wound with sterile gauze and bandage it quite firmly. Have the patient lie down and elevate the injured part. Apply an ice cap and keep the patient quiet.

In any kind of bleeding, the general principles of treatment include the use of pressure, application of an ice cap, elevation of the injured part, and rest for the patient. Keep the patient warm and, after the bleeding has stopped, a hot drink may be given. Watch carefully to see that the wound does not start to bleed again.

Bleeding in the extremities may also be controlled by position. To control bleeding in the palm of the hand, raise the arm above the head and have the patient grasp a small hard object. The pressure may be increased and the position supported by binding the hand in this position with a triangular bandage or large handkerchief.

To control bleeding in the wrist or forearm, place a small hard object on the inner surface of the elbow. Bend the forearm and bandage it firmly to the upper arm.

Bleeding in the leg or foot may be stopped by bending the knee with a hard object inserted underneath. For bleeding in the thigh, place the hard object on the inner surface of the groin and double the leg back against the abdomen. Tie it to hold it in position.

Snake bites. — Tear open the clothes quickly to expose the wound. Apply a tourniquet above the wound and make enough pressure to stop circulation so that the poison will not be carried through the blood stream. A triangular bandage, tie, belt, strap, rope, or anything of the kind may be used as a tourniquet. Suck the wound to draw the poison out. There

is no danger from taking the poison in the mouth unless it is swallowed. Loosen the tourniquet a little every twenty or thirty minutes without releasing it entirely. Get the patient to a surgeon as quickly as possible.

Lifting an injured person. — An injured person is not lifted unless absolutely necessary, but when such lifting has to be done, great care must be taken that the patient does not receive further injury while being moved. After giving the needed first-aid treatment, prepare the patient for moving and decide upon the method of transportation.

A stretcher should be improvised for serious cases. This calls for considerable ingenuity and judgment. A wide board or shutter (padded, if possible) makes a good improvised stretcher. A blanket, or two or three coats, may be used between two poles. Turn the sleeves of the coats inside out and button the coats together over the sleeves. Pass two stout poles through the sleeves and let the backs of the coats form the top of the stretcher. Sacks may be used in a similar way. Always test the strength of the stretcher before placing the patient on it. To lift the patient on to the stretcher, place it in line with the body and have three persons stationed on the opposite side. The first lifts the head and shoulders; the second, the hips and back; and the third, the feet and legs. One person should give a command so that all three may lift at the same time.

Three persons are needed to carry a patient easily and comfortably. They take their places in the same way as when lifting a patient to a stretcher. Each one kneels on the knee which is toward the patient's feet, and then slides his arms under the patient. At the command, "Lift," they lift the patient to their knees. At the command, "Prepare to rise,"

they turn the patient forward against their chests. At the command, "Rise," they rise to their feet and walk forward in step.

Perhaps the easiest way for two persons to carry an injured person is by making a saddle with their hands. The patient sits in the saddle with his arms around the necks of the bearers.* Another method is to tie ends of a rolled blanket together and loop it over the shoulders of two persons. The patient sits on the lower loop and leans back against the upper one.

Only in extreme emergencies should a woman attempt to lift an injured person alone.

Artificial respiration. — When for any reason breathing is inhibited or paralyzed, the patient must be resuscitated by means of artificial respiration. By this we mean the forcing of air into and out of the lungs to restore normal breathing. This may be necessary following an electric shock, suffocation from inhaling smoke or gas, or asphyxiation due to the exclusion of air, as in drowning. When giving artificial respiration, act promptly but avoid hurried or irregular motions. If the patient is indoors, see that the room is not overheated or overcrowded. The simplest method of artificial respiration is the *prone pressure* or *Schaefer method*. The following directions are taken from a report of the United States Public Health Service.

1. Lay the patient on his belly, one arm extended directly overhead, the other arm bent at elbow and with the face turned outward and resting on hand or forearm so that the nose and mouth are free for breathing. (See Fig. 1)

* Ordinary usage employs the masculine pronoun when the person referred to may be male or female. In some parts of this book the feminine pronoun is employed because it seems more natural for teaching purposes.

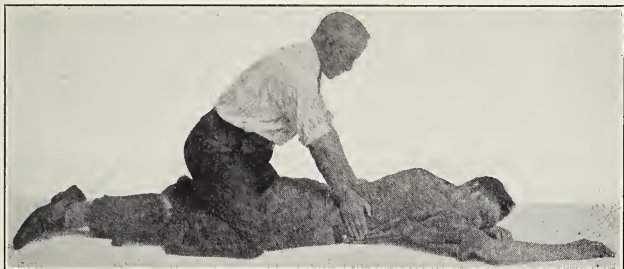


FIGURE 1

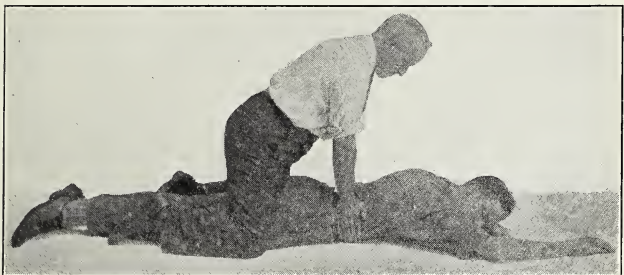


FIGURE 2

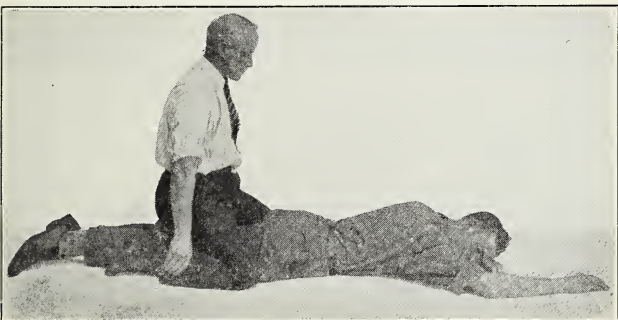


FIGURE 3

(Reproduced by courtesy of the United States Public Health Service)

2. Kneel straddling the patient's thighs with your knees placed at such a distance from the hip bones as will allow you to assume the position shown in Figure 1.

Place the palms of the hands on the small of the back with fingers resting on the ribs, the little finger just touching the lowest rib, with the thumb and fingers in a natural position, and the tips of the fingers just out of sight. (See Fig. 1)

3. With arms held straight, swing forward slowly so that the weight of your body is gradually brought to bear upon the patient. The shoulder should be directly over the heel of the hand at the end of the forward swing. (See Fig. 2.) Do not bend your elbows. This operation should take about two seconds.
4. Now immediately swing backward so as to remove the pressure completely. (See Fig. 3)
5. After two seconds, swing forward again. Thus repeat deliberately twelve to fifteen times a minute the double movement of compression and release, a complete respiration in four or five seconds.
6. Continue artificial respiration without interruption until natural breathing is restored, if necessary, four hours or longer, or until a physician declares that the patient is dead.
7. As soon as this artificial respiration has been started and while it is being continued, an assistant should loosen any tight clothing about the patient's neck, chest, or waist. *Keep the patient warm.* Do not give any liquids whatever by mouth until the patient is fully conscious.
8. To avoid strain on the heart when the patient revives, he should be kept lying down and not allowed to stand or sit

up. If the doctor has not arrived by the time the patient has revived, he should be given some stimulant, such as one teaspoonful of aromatic spirits of ammonia in a small glass of water or a hot drink of coffee or tea. The patient should be kept warm.

9. Resuscitation should be carried on at the nearest possible point to where the patient received his injuries. He should not be moved from this point until he is breathing normally of his own volition and then moved only in a lying position. Should it be necessary, due to extreme weather conditions, etc., to move the patient before he is breathing normally, resuscitation should be carried on during the time that he is being moved.
10. A brief return of natural respiration is not a certain indication for stopping the resuscitation. Not infrequently the patient, after a temporary recovery of respiration, stops breathing again. The patient must be watched and if natural breathing stops, artificial respiration should be resumed at once.
11. In carrying out resuscitation it may be necessary to change the operator. This change must be made without losing the rhythm of respiration. By this procedure no confusion results at the time of change of operator and a regular rhythm is kept up.

The chief consideration in the aftercare of the resuscitated patient is to give rest and warmth so that the circulation will become normal. Get the patient into bed as soon as possible, using warm blankets and hot-water bottles to provide extra warmth. Have the windows open to supply an abundance of fresh air. Keep the patient quiet and induce sleep as soon as possible.

REVIEW

1. What bandage is used as the basis of all kinds of bandaging?
When would you use a gauze bandage? A muslin bandage?
2. What is meant by an initial turn?
3. How would you make a triangular bandage? For what purposes would you use it?
4. What usually causes a sprain, and what would you do to relieve it?
5. What is a strain? How should it be treated?
6. What are the three types of bleeding? How are they recognized? How are they controlled?
7. What are the important points in the aftercare of a resuscitated person?

SUGGESTED ACTIVITIES

1. Add to your scrapbook any illustrations suggested by material in this chapter.
2. Practice applying different kinds of bandages.
3. Demonstrate the proper way to remove a roller bandage.
4. Demonstrate the method of applying the broad or the narrow bandage.
5. Practice the application of slings.
6. Demonstrate how to apply a splint to the arm.
7. Demonstrate how to apply a tourniquet.
8. Demonstrate ways of controlling bleeding by position.
9. Practice (in groups of four) lifting and moving a person.
10. Practice giving artificial respiration.

CHAPTER XVI

HOUSEHOLD EMERGENCIES

General principles. — In all forms of emergency treatment the general principles of first aid are the same. One person must take charge of the situation, give the necessary orders, deal with the patient gently but firmly, and give whatever first-aid treatment is most urgent. The person in charge should stay with the patient constantly and ask others to bring whatever is needed. One needs to be alert, to observe the patient carefully, and to use one's best judgment in making decisions.

Note the cause and signs of injury. Be considerate and tactful. Avoid unnecessary questions. Be clear and direct in giving instructions to the patient and to those helping you. Be resourceful in using to the best advantage whatever materials you have. If there are several injuries, discriminate between the important and the less important. Decide quickly which should be treated first. If the injury is at all serious, send for a doctor at once.

Place the patient in a comfortable position and loosen any tight clothing. If you are indoors, have the windows open, but avoid chilling. Give the patient plenty of fresh air so that he can breathe comfortably. If breathing seems difficult, he may be more comfortable in a sitting position. If there is faintness, let the head be lower than the rest of the body. If vomiting occurs, turn the head to one side to prevent choking.

Shock or collapse. — Shock is a general, sudden depres-

sion of the nervous system due to injury or emotional excitement. It is rather common following serious accidents or great emotional strain. When an accident occurs, the injured person should not be allowed to see his injuries and should be protected as far as possible from an emotional upset. When such precautions are taken, it is often possible to prevent shock.

In a condition of shock, the blood vessels fail to distribute the blood normally. The lips are white, the skin is pale, and the nails are blue. The body feels cold and clammy. The pulse is weak and rapid. The patient is in a stupor, with half-opened eyelids. There may be partial or complete unconsciousness.

The patient should lie upon his back with the head lower than the body. Cover with warm blankets and apply heat in every way possible. Let the patient inhale smelling salts or aromatic spirits of ammonia. When he regains consciousness, give a teaspoonful of aromatic spirits of ammonia in half a glass of water. A hot drink may be substituted. Always send for a doctor before beginning the emergency relief.

Fainting. — Fainting is a form of unconsciousness. The patient should be placed flat on his back with a pillow or folded coat or blanket under the shoulders so that the head is lower than the body. Supply an abundance of fresh air. If indoors, open the windows; keep bystanders away. Loosen any tight clothing. Let the patient inhale smelling salts or aromatic spirits of ammonia. Hold the bottle slightly away from the nose, or saturate a piece of cotton or a clean handkerchief and hold it near the nostrils. The eyes and forehead may be washed with cold water. The arms and legs may be rubbed. When the patient has regained consciousness, give a glass of

cold water or a teaspoonful of aromatic spirits of ammonia in half a glass of water. Keep the patient lying down for at least half an hour. A cold compress may be placed on the forehead. The body should be covered and kept warm. Dropping the head forward between the knees will often prevent fainting, but this should not be done if fainting has actually occurred.

Convulsions. — Convulsions are involuntary muscular contractions, a twitching and jerking of the muscles. A convulsion may be partial or complete; that is, it may involve all the muscles of the body or only one group of muscles.

A patient having a convulsion is treated in much the same way as a person who has fainted. Place him flat on his back and quickly thrust something between the teeth to prevent the biting of the tongue or cheeks. A flat solid object, wrapped in gauze or a clean handkerchief, is satisfactory. A ruler, pencil, or a folded towel may be used. Send for the physician at once. Keep the patient quiet and warm. Place cold compresses or an ice cap on the forehead. (The treatment for a baby in a convulsion will be given in a later chapter.)

Burns. — Slight burns or scalds are treated by applying picric-acid gauze, picric acid (liquid), or carron oil. Picric-acid gauze is moistened with water before placing it over the burn. If carron oil or the liquid solution of picric acid is used, saturate the burn and cover with sterile gauze. Apply a loose bandage to hold the dressing in place. Burns are accompanied by intense pain, which is increased by exposure to air. The main factor in giving relief is to keep air away from the injured surface. When carron oil or picric acid are being used, a thick layer of cotton may be put over the sterile gauze before bandaging. The triangular bandage may be applied

loosely and comfortably over a burned hand or foot. Various substitutes may be used in emergencies: vaseline, castor oil, olive oil, lard, white of egg, or a paste of soda and water. Severe burns should always be treated by a physician.

Sometimes a burn is caused by lye or strong ammonia. Such a burn is washed off by pouring water over it first, and then vinegar. The burn may then be treated and dressed like any other.

A carbolic-acid burn is treated by pouring alcohol (full strength) over it.

Acid burns should be washed with water and then covered with a paste of baking soda or flooded with lime water. Chalk, tooth powder, or a piece of plaster from the wall may be used to make lime water, if necessary.

If acid gets into the eye, flush with lime water, milk, or boric-acid solution. Burns in the mouth or throat may be treated by having the patient drink an oil or white of egg. For caustic potash or ammonia burns, rinse the mouth with diluted vinegar.

If a person's clothing catches on fire, make him lie down and roll. Throw him down, if necessary, and wrap him in a rug, blanket, coat, or anything which will smother the flame. Cold water may be dashed over him. When the fire is out, cut the clothes away gently and cover the burns freely with carron oil or picric acid. Send for a physician if the burn is at all severe.

Sunburn. — Treat as a slight burn. Apply carron oil, vaseline, or soda paste. Cover with gauze or old linen, and bandage.

Sunstroke. — When a person has sunstroke the skin is dry and hot, the face red, the pulse slow, and the breathing labored. There may be unconsciousness. Get the patient to a dry,

shady place, loosen any tight clothing, and elevate the head and shoulders. Wash the face with cold water or pour cold water over the head. Get the patient into a cool bed as quickly as possible. Place an ice cap on the head and keep the patient quiet.

Heat prostration. — The signs of heat prostration are pale face, clammy skin, shallow breathing, and rapid pulse. The patient is not unconscious. Place the patient flat on his back and loosen any tight clothing. Cover the body and apply heat to the feet and spine. Bathe the face with warm water and give a drink of warm tea, coffee, milk, or broth. Send for a physician.

Poisons. — Poisons are certain drugs and other substances which produce serious disorders in the body and may even cause death when taken in large doses. Each poison produces definite symptoms which should be interpreted by the physician. Each poison also has its own antidote. An *antidote* is a specific remedy for a poison. It is a substance which changes the chemical nature of the poison, prevents its absorption by the body, or counteracts its action by producing opposite effects. The facts concerning common poisons, their antidotes, and special treatment, as presented in the following table, are taken from Johnson's *First Aid Manual*.

SUGGESTED TREATMENT FOR SPECIAL POISONS

<i>Poison</i>	<i>Treatment</i>
Sulphuric acid	<i>No emetic.</i> Give one or two tablespoonfuls of magnesia, chalk, soapsuds, raw eggs, milk, or sweet oil.
Muriatic acid	
Oxalic acid	
Nitric acid	

Carbolic acid
Creosote

If detected immediately, give castor oil, sweet oil, raw eggs, or milk, followed by an emetic — a tablespoonful of Epsom salts or Glauber salts in small tumblerful of milk or water; also mucilaginous drinks.

Camphor

Give emetics and stimulants. Apply warmth to extremities.

Chloral

Give an emetic. Give stimulants. Keep patient aroused. Apply mustard plaster over heart and calves of legs. Use artificial respiration.

Caustic soda
Caustic potash

Give vinegar, juice of orange or lemon, citric or tartaric acids. Give also raw eggs, sweet oil, barley water, or arrowroot gruel.

Arsenic
Paris Green, etc.

Give emetics of hot greasy water, or salt and water promptly; a large amount of magnesia or lime scraped from the walls or ceiling. Give castor oil, sweet oil, or equal parts of sweet oil and lime water, or lime water alone, raw eggs, milk, and stimulants (well diluted).

Blue vitriol
Blue stone

Give copious draughts of warm water and emetics; give white of eggs, milk, oils, flax-seed tea, and demulcent drinks.

Corrosive sublimate
(Bichloride of mercury)

If detected immediately after swallowing, give an emetic, white of eggs, milk, mucilage, arrowroot gruel, barley water, or flour and water — and give all that the patient will swallow.

Iodine	Give any kind of starch or starch food freely; wheat, flour, or arrowroot boiled in water — freely; chalk, magnesia, and stimulants. Give emetics and apply external heat.
Lead	Induce vomiting. Give large doses of Epsom or Glauber salts. Apply mustard
Red lead	plasters to extremities. Give stimulating,
Sugar of lead	sweet, or mucilaginous drinks.
White lead	
Paints	
Phosphorus	Give emetics, followed by magnesia, white of eggs, purgatives. No fats or oils.
Zinc-sulphate or chloride	Give bicarbonate of soda (baking powder in water); milk, white of eggs, mucilaginous drinks, and emetics.
Poisonous mushrooms (toad stools)	Give emetics, castor oil, stimulants, and apply heat. The same treatment is applicable to poisoning by eating mussels or poisonous fish.

When a person has swallowed a poison, always send for a physician immediately. In the meantime, try to make the patient vomit. Put your finger in the back of the patient's throat and wiggle it about. Give a glass of lukewarm water containing two teaspoonfuls of mustard. A warm salt solution is often effective.

The average person cannot remember the antidote for each poison. The important thing to remember is to make the patient vomit. Call the doctor immediately and he will tell what treatment is to be given before he arrives. Keep in the medicine cabinet a book which gives the list of specific antidotes.

Poison ivy. — Everyone should learn to recognize poison ivy, which is a creeping or climbing vine found in all parts of the United States. It has a compound leaf with three leaflets. These leaflets are pointed, slightly notched, and very glossy. In the fall the leaves take on a beautiful crimson and yellow coloring. The berries are white and grow in bunches. Learn to recognize the plant and avoid it.

The best treatment for poison ivy is to scrub the infected areas as soon as possible with soap, brush, and warm water; then apply a soda paste.

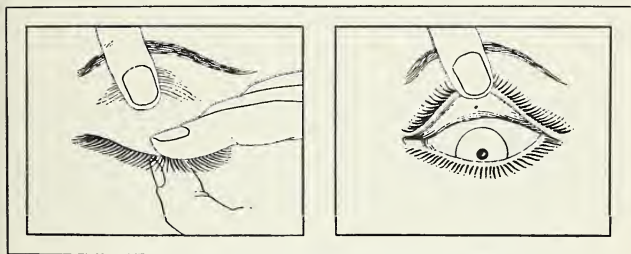
Insect bites. — The bite of an ordinary insect, such as a spider or mosquito, may be treated by applying damp salt, ammonia water, or alcohol. It is best to call a physician when a person has been bitten by a scorpion, centipede, or tarantula. Before the doctor arrives, you may apply ammonia after you have removed the sting left by the insect.

Nosebleed. — To stop a nosebleed, bathe the face in cold water and make pressure over the upper lip. Place an ice cap at the back of the neck or on the forehead. Cotton or gauze wrung out of cold water may be inserted gently in the nostril. At the same time press gently with the finger on the side which is bleeding. Keep the patient quiet and elevate the head. A back rest can be used to advantage. If the bleeding cannot be controlled within a reasonable length of time, call the physician.

Foreign bodies in the eye, nose, ear, and throat. — When a foreign body gets into the eye, keep the eye closed and do not rub it. One of the simplest methods of removing a dust particle, cinder, or grain of sand from the eye is to wash it out with a little warm boric-acid solution in an eyecup. Fit the cup over the eye and, bending the head backward, open and close the eyelid.

Another method is to pull the upper lid away from the eyeball, draw it down over the lower lid, and hold it there for two or three seconds. The tears may wash the cinder down where it will be caught on the lower lid. If the object is seen, wipe it off with a clean handkerchief or piece of gauze.

If these methods are not successful, pull out the lower lid and ask the patient to look up. If nothing is seen there, invert the upper lid. To do this, take hold of the lashes and pull the upper lid forward and downward, then outward and



REMOVING A CINDER FROM THE EYE

upward over the forefinger of your left hand, which is held on the lid. Ask the patient to look downward. Look carefully on the inner surface of the upper lid. If the foreign body is seen, wipe it off with a clean piece of gauze or a clean handkerchief. If it is impossible to locate and remove the object which is causing the trouble, the patient must see a physician.

To remove a foreign body from the nose, close the opposite side and blow vigorously. Never poke about in the nostril in an attempt to remove an object. Clumsy and unwise effort may move the object farther in, thus complicating the condition and increasing the danger.

Make no attempt to remove a foreign body from the ear because you are likely to injure the eardrum or push the object farther in. Never insert pins or hairpins into the ear. Take the patient to a doctor who has the proper instruments with which to work.

Summon a physician promptly when a foreign body is lodged in the throat. Unless the patient has difficulty in breathing, give no first-aid treatment until the doctor arrives. If the cause of the obstruction is slight, the person may be relieved by eating a piece of bread. A child may be held up by his feet and slapped on the back.

REVIEW

1. Discuss the general principles to be remembered in treating emergencies.
2. What things were mentioned in this chapter as causes of shock? How is shock recognized? How would you treat it?
3. Tell how to treat different kinds of burns.
4. Tell what to do for sunstroke.
5. Tell what to do for heat prostration.
6. What should be done for a patient having a convulsion?
7. What is the treatment for poison ivy?
8. What would you do to stop nosebleed?
9. What should be done for foreign bodies in the nose or ear?

SUGGESTED ACTIVITIES

1. Demonstrate the method of preventing fainting. Demonstrate the method of reviving a person who has fainted.
2. Demonstrate how to treat and bandage a burn.
3. Demonstrate how to remove a cinder from the eye.

CHAPTER XVII

THE BABY'S LAYETTE

Do you know the articles of clothing which a baby wears?

Can you select and arrange the various things needed for a baby's bath?

What kind of scales should be used?

Do you know the best type of crib to buy?

How should it be lined? Why?

Perhaps you have seen an older sister or a friend buy baby clothes and supplies. If so, you may realize that there is a great temptation to buy dainty, pretty things rather than the practical, useful things. The baby really needs very little, but it is important to know how to supply those needs satisfactorily.

All clothing and articles needed in the care of the infant or small child should be quite simple and plain. Plain garments are more easily laundered. Trimming near the neck or wrists may cause chafing. Do you know other reasons why over-trimmed garments should be avoided?

In homes where it is possible, a room should be prepared for the exclusive use of the baby. It should be thoroughly cleaned and the baby supplies moved into it. If necessary, the mother or the person taking care of the baby may sleep in the baby's room, but during the day he should have the room entirely to himself.

The following is a list of the essential things needed for the

room and for the daily care of the baby. It is far more sensible to spend money for these conveniences which simplify the work of caring for the baby than to buy elaborate clothes or expensive carriages which are seldom, if ever, needed.

Crib or bassinet

Bureau for clothes

Folding canvas table (sewing table or clean kitchen table may be used)

Folding rubber bathtub (enamel basin or foot tub may be used)

Scales (Fairbanks or some other beam scale)

Small portable clothes rack

Covered enameled pail for diapers

Enameled tray for bath articles

Covered jar for boric-acid solution or boiled water

Covered jar for absorbent cotton

Covered jar for oil (jelly glasses may be used)

Small covered dish or jar for toothpick swabs

Bath thermometer

Room thermometer

4 small soft wash cloths (Arnold Knot or Turknit are good) or old linen handkerchiefs

6 small face towels

6 bath towels (Arnold Knot or Turknit)

6 crib sheets

1 flannel crib blanket

1 yard rubber Stork sheeting

1 firm hair mattress for crib

1 lb. of absorbent cotton

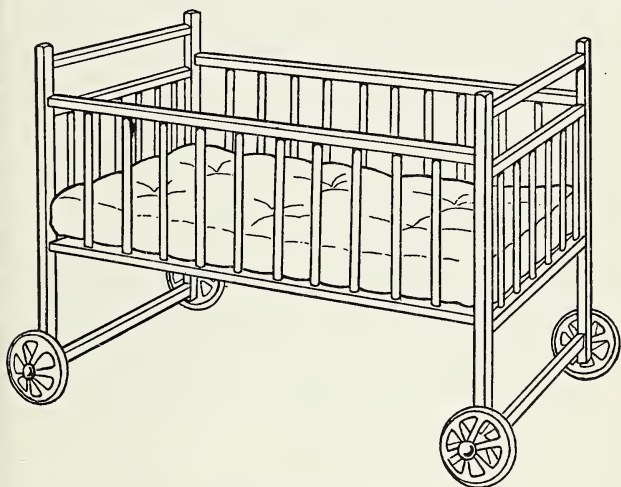
$\frac{1}{4}$ lb of boric-acid crystals

6 oz. of abolene, olive oil, or almond sweet oil

Castile soap

1 box of baby talcum powder (unscented)

The baby's bed. — A crib is more satisfactory than a basket or a bassinet because the baby can use it for a longer period of time. A crib or bassinet should be lined with a plain, washable material, such as dotted Swiss or dimity. The lining may be tied on with tape so that it can be removed and washed



THE BABY'S CRIB

as often as necessary. The crib should have a well-made, firm, cotton or hair mattress. Never use a soft pillow as a mattress in a crib. The baby may bury his face in it and smother to death.

Never use pillows under a baby's head or at the top of a bassinet as a decoration. It is also extremely dangerous to place one at the head of a crib unless it is securely fastened so that it cannot fall over on the baby. A clothesbasket may be

used for a baby to sleep in during the first two or three months. The child soon outgrows this, of course.

Folding canvas table. — It is desirable to have a table on which to lay the baby while he is being dressed, diapered, or fed. There are on the market folding canvas tables which are exactly the right height for the mother to stand and work over the baby comfortably without bending. These tables can be kept in the baby's room or in the bathroom. If the



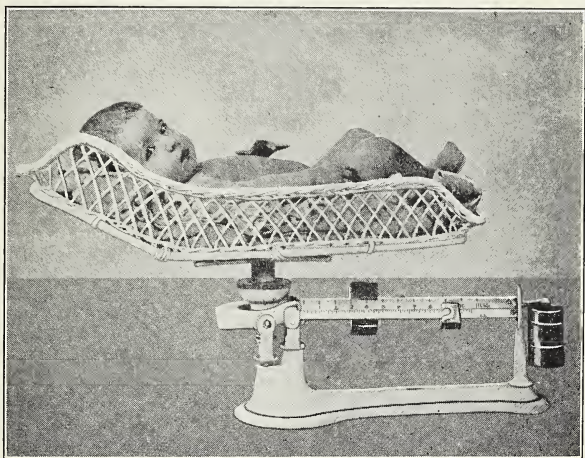
BABY'S BATH TRAY

room is crowded, they can be folded and kept behind a door when not in use. A sewing table or any oblong table which is the proper height can be used for this purpose.

Folding rubber bathtub. — The most satisfactory kind of tub to use is the combination rubber tub and canvas table which stretches across the regular bathtub. If the bathroom has a built-in tub which is attached to the wall, this type of tub cannot be used. Another good kind is the standing rubber tub, which can be bought in two different heights. Rubber tubs must be thoroughly dried before being folded or the rubber may crack. A small tin or enamel foot tub may be used

on a table or chair. These are not so convenient and the baby soon outgrows them.

Scales. — A good scale is one of the most essential articles to have for the baby. Never buy the spring scales. The



WEIGHING THE BABY ON A BEAM SCALE

(From Morse, Wyman, and Hill's *The Infant and the Young Child*, by courtesy of W. B. Saunders Company)

Fairbanks or some other beam scale, with a basket or scoop, is the most satisfactory kind.

Bath tray. — Certain articles are needed for the baby's bath. It is convenient to arrange these things on a tray where they may be kept clean and ready for use. Any medium-sized tin, enameled, or wooden tray will do. Place on it the covered jars (jelly glasses may be used) for cotton, oil, boric-acid solution, and toothpick swabs. Powder, lanolin,

and bath soap may also be kept on this tray. A small bar of Ivory soap makes a good pin-cushion for the safety pins.

Clothes. — Good taste and judgment are shown by selecting simple, comfortable clothes for the baby. Silk-and-wool next to the skin is better than all wool. Babies born in temperate climates during summer and late spring are more comfortable with cotton undergarments. The weight of clothing should vary with the temperature out of doors and in the house. Many babies suffer from being dressed too warmly. Babies are very susceptible to heat. Feel the child's skin and make your adjustment of clothing and bedclothes according to the heat of his body.

The wise mother spends her money on the essential things needed in the care of the baby and buys only such clothes as the baby actually needs. A baby grows very fast and he can get along with very little if his laundry is done every day.

The following articles of clothing are needed for the newborn baby and are usually sufficient for his needs during the first two or three months:

- 4 silk-and-wool or cotton sleeveless bands
- 4 silk-and-wool or cotton knitted bands
- 4 silk-and-wool shirts
- 4 Arnold Knit nightgowns
- 2 long dresses
- 2 white lawn petticoats
- 3 to 5 dozen diapers 18" by 36"
- 2 knitted sweaters
- 2 flannel wrapping blankets
- 2 or 3 knitted or woven carriage blankets
- 2 or 3 pairs booties or stockings

The silk-and-wool garments should be washed with Ivory soap in lukewarm water and rinsed in water of the same temperature. They should be washed every morning. If they are laundered in hot water they get yellow and hard. The amount of laundry is less if the infant is kept in his nightgown during the first two or three months. He looks just as sweet, and the weight of the clothing is more easily adjusted.

REVIEW

1. Answer the questions at the beginning of this chapter.
2. What general rule would you follow in buying clothes and supplies for a baby?
3. Describe three types of beds which can be used for a baby.
4. What kind of mattress should always be used in a crib or bassinet? Why?
5. What can be used for a baby to lie on while he is being dressed, diapered, or fed?
6. Describe the most satisfactory type of bathtub to use. Give your reasons.
7. What articles are needed on the bath tray?
8. What weight bands and shirts would you buy for a late spring or a summer baby? Why?
9. How should silk-and-wool garments be washed?

SUGGESTED ACTIVITIES

1. Add a page to your scrapbook to show a baby's layette and one to show the supplies needed in the care of a baby. Under the pictured garments write your reasons for selecting them.
2. Write an essay discussing the change of style in dress for babies of the past three or four generations. Compare the artistic qualities, the warmth, the ease in laundering.

3. Make individual booklets showing pictured garments and room supplies which you could afford to buy. Under each picture write your reason for their selection.
4. If your classroom hasn't the covered jars for the baby tray, bring jelly glasses from home. Practice arranging the tray for use.
5. Visit a well-baby clinic and watch the doctors or nurses weigh the babies. Notice how they are dressed.

CHAPTER XVIII

GENERAL DEVELOPMENT OF THE INFANT

Weight. — At birth the average baby weighs about seven pounds. A girl baby usually weighs three or four ounces less than a boy baby. There is a loss of weight during the first three or four days. This varies considerably, but most babies lose from five to twelve ounces. The loss is due to the elimination of waste from the bowels and kidneys, and to the fact that the baby gets little or no food before the third day. The baby should regain his birth weight by the tenth day.

For example, a baby who weighs seven pounds and eight ounces at birth may lose three ounces the first day, two and a half ounces the second day, and hold his weight on the third day. If he gets food then, he should gain on the fourth day and continue gaining until, by the tenth day, he has regained his birth weight of seven pounds and eight ounces. From that time on, the baby gains rapidly during the early months.

The average baby should gain from five to ten ounces a week through the first five months. The mother must not expect him to gain the same amount each week. The important thing is to see that he makes a steady gain and that the average is satisfactory. He may gain only two ounces in one week and then gain twelve or fourteen ounces the next week, making a normal average for the two weeks. A cold or any slight illness affects the weight so that the baby will not gain and may even lose.

By the fifth or sixth month the birth weight should be

doubled, and by the end of the first year it should be tripled. A baby who weighs seven pounds at birth should weigh fourteen pounds by the fifth or sixth month. A larger baby would weigh more. You can see readily that it is unfair to compare the actual weight of babies or their exact amount of gain. We see the slender, stocky, and intermediate types of body in babies just as in adults. Children of tall parents are likely to be tall and children of short parents are likely to be short. The gain in weight and height will naturally vary in these two types. In considering the child's nutrition, the relation of his weight to his own height is a better index than comparison with a general average.

As soon as the baby is well established on his diet, it is unnecessary to weigh him every day. A weekly record is sufficient. Always weigh the baby on the same day of the week, at the same time of day. He is weighed without his clothes. A satisfactory time for weighing is just before the morning bath.

Height. — The average new-born baby measures about twenty inches in height. He grows about eight or nine inches during the first year, and about three or four inches during the second year so that at one year of age he measures about twenty-nine inches, and at two years he measures about thirty-three inches. (The weight-height-age tables as published by the Children's Bureau will be found in the Appendix.)

The head. — At birth the head is relatively large and needs to be carefully supported whenever the baby is moved or held in the arms. About the third or fourth month the baby is able to hold his head up when the rest of the body is supported. The soft spot on the top of the head is called the *fontanel*. This is a natural condition which is due to the fact that the

bones of the skull are separated at that point at the time of birth. The fontanel should close by the eighteenth month.

Hair. — Some babies are born with a great deal of hair and others are practically bald. The baby hair falls out during the first five months and is replaced by a new growth.

Sight. — At birth all babies have blue eyes. Later they change to a permanent color. At first the baby does not see well and his eyes are extremely sensitive to light. Avoid exposing him to bright lights but, on the other hand, do not accustom him to extremely dim light. The baby is usually unable to focus his eyes well or to fix his gaze before he is three or four months old. It is not unusual therefore for him to cross his eyes during this period. Most babies are able to recognize objects at two or three months.

Touch. — The baby's sense of touch is very acute. He should be protected from jolts, jars, and sudden or swift motion. His mouth is extremely sensitive. The baby's garments should not have ribbons, bows, or collars which may brush against his cheek or mouth and suggest food to him.

Hearing. — At birth the baby does not hear, but after four or five days, his hearing becomes very sharp. Protect him from sudden, loud, or unpleasant noises. He is sensitive to voices and, although he does not know words, he does understand voice inflections. Use a natural speaking tone while working with the new-born baby.

Smell. — It is difficult to learn much about the baby's sense of smell but, as far as we can observe, this sense is practically lacking.

Taste. — The sense of taste is developed at birth but is not acute during the first few months.

Teeth. — At birth the teeth are contained within the gums.

Babies vary considerably in the age at which they cut their first teeth. Occasionally an infant is born with a tooth. Perfectly normal babies may be very late in cutting their first teeth. The usual time of appearance is as follows:

- 6 to 9 months — 2 lower incisors
- 8 to 12 months — 4 upper incisors
- 12 to 15 months — 2 lower lateral incisors, first 4 molars
- 18 to 24 months — 4 canines ("eye" and "stomach" teeth)
- 24 to 30 months — the other 4 molars

At the age of two and a half years the average child has his complete set of twenty *baby*, or *temporary*, teeth. The first *permanent* teeth do not appear until about the sixth year.

There is a general belief among mothers and grandmothers that teething is a very disturbing process. All ailments between the sixth and fourteenth months are usually attributed to this. Careful investigation indicates that there is usually some other cause for these illnesses.

Every baby is cutting teeth continuously from six months of age to two and a half years, and the majority of them have no trouble. A nervous child may show slight temperature or have some nausea and vomiting. These symptoms subside quickly, however, as soon as the tooth comes through. Teething does sometimes disturb a baby when the gum above the erupting tooth is hot, swollen, and tender. The mother can do nothing to relieve such a condition. Rubbing the gum does not help. If the condition is severe, send for the doctor who can lance the gum.

From the time the baby cuts his first teeth they should be kept clean. The first few teeth may be cleaned with a piece of gauze wrapped over the finger, dipped into a salt solution,

and wiped over the teeth front and back. As soon as there are six or seven teeth, use a small, soft-bristled toothbrush with a weak salt or soda solution, or milk of magnesia. A tooth paste or powder need not be used until the child is older.

Sitting up. — The baby should not be encouraged to sit up too soon. When his back is strong enough he will sit up of his own accord. By the time he is six or seven months old, he should be able to hold himself without support if he is placed in an upright position. When the baby first begins to sit up, support him with pillows and leave him in the upright position for only a short time.

Walking. — Babies can usually stand alone when they are eleven months old, and about the fifteenth month they are able to walk. They vary in this considerably. Some walk earlier and others later. No baby should be rushed or urged to walk. He will walk when he is strong enough. If a child does not walk at the end of two years, he should be taken to the doctor for a careful examination.

General behavior. — At birth the baby cries, kicks, and takes feeding. He sleeps almost constantly during the first month or two. As the special senses develop, he gradually sleeps less. At two or three months he may lie quietly with eyes open for short periods during the day, and sleep only eighteen to twenty hours.

He smiles when he is four or five weeks old and laughs at about the third or fourth month. He may begin to coo and make noises as early as two months. When two or three months old he seems to recognize persons. At four months he deliberately grasps objects. He says words when he is ten or twelve months old and puts short sentences together at about two years of age.

Control of bowel movements and urine. — The baby can be trained while very young to have regular bowel movements at the same time each day. Hold him over a small chamber on your lap in a comfortable, reclining position, and use a soap stick or an infant-sized glycerine suppository to stimulate the desire to empty the bowels. Many doctors object to the use of the soap stick or suppository. They advise in its place giving a small enema of warm water with a rubber ear syringe. The most convenient time for this training is just before the morning bath.

Such training of the baby may begin at the second or third month. This does not mean that he will never soil his diapers. He is merely being trained to establish a habit which will persist as he grows older. If you find, by watching the baby, that he has two stools a day, a second definite time may be selected for placing him over the chamber. By the time he is eighteen months old, he should seldom have a soiled diaper, and should never have one by the time he is two years old.

Babies void frequently and it is more difficult to establish the habit of controlling the urine. When you start to train the baby, follow one method persistently. Put him on the chair before and shortly after meals, and before and after naps. Take him up once or twice in the evening after he has been put to bed, for example, at eight o'clock and again at ten or eleven. Do not talk to him at this time or turn on bright lights to awaken him. Speak quietly as you place him on the chair. Then put him back to bed without conversation.

Such training demands time and patience but it is the only method which is fair to the child. He should be thoroughly trained to control the urine during the day by the end of the second year.

REVIEW

1. What is the average weight at birth?
2. Why does a baby lose weight the first two or three days of life?
3. About how long does it take a baby to regain his birth weight?
4. What should the weekly gain be during the first five months?
5. What is the important thing to consider in watching a baby's weight record?
6. How much should a baby weigh at six months? At one year?
7. How often should a baby be weighed?
8. How should a baby be moved? Why?
9. Why is it important to speak quietly while working with a baby?
10. When does a baby usually begin to cut his teeth? When should he have his complete set of baby teeth?
11. How should the baby's teeth be cared for?
12. When does the average baby sit up?
13. Should a baby be urged to walk? Explain your answer.
14. What things are to be expected in the normal behavior of a baby?
15. Describe the method of training a baby to have a regular bowel movement each day.
16. How may a child be taught to control the urine? At what age should he be expected to control it during the day?

SUGGESTED ACTIVITIES

1. Add to your scrapbook any material suggested by this chapter.
2. Demonstrate the method of holding a baby so as to give support to his head.

CHAPTER XIX

GENERAL CARE OF THE INFANT

Do you know a healthy, attractive baby?

Does his mother follow a definite plan in carrying out his daily program?

Is there any relation between a baby's physical condition and the kind of care he receives?

Every baby should be kept under the care of a good physician, preferably a pediatrician. The pediatrician is a doctor who is specially trained in the knowledge of child care and childhood diseases. He knows how to determine whether the baby has the food which is needed for his normal development. He helps the mother to keep the baby well; if the child becomes ill, the pediatrician has the advantage of being already acquainted with him and knows about his general physical condition and his native endurance. It is worth great sacrifice of other things to keep the baby under the care of a pediatrician at least during the first year.

Federal bureaus, state health departments, and local boards of health do a great deal of work toward providing better conditions for babies and young children. Various child-welfare associations have been organized to contribute to this program for child health. Such agencies furnish opportunity for mothers to receive instruction in the best methods of giving daily routine care to their babies. There are well-baby clinics where mothers can have their children weighed and examined, and their routine checked by competent physicians.

Reliable literature on infant care can be secured from health departments.

Regularity. — A baby's digestive system is weak. He must be fed properly and regularly. However skillfully the pediatrician may direct the care of the infant, the child will not progress satisfactorily unless his routine is carried out with regularity as ordered. The few daily events in the baby's life should be repeated with little or no variation. This lessens the chance of nervous fatigue. A baby's nervous system is delicate. He is easily overstimulated, with the result that he is likely to have convulsions or other nervous outbreaks. Nervous fatigue should be reduced to the minimum. The bath, feedings, exercise periods, and hours of sleep should be arranged and carried out with unfailing regularity. This helps the baby to get accustomed to his surroundings.

The feeding schedule will control somewhat the planning of the daily program. If the new-born baby is on a three-hour feeding schedule, a program similar to the following should be arranged:

- 6:00 A.M. Diaper and feed
- 8:30 A.M. Bathe
- 9:00 A.M. Feed
- 12:00 M. Diaper and feed
- 3:00 P.M. Diaper and feed
- 6:00 P.M. Sponge bath or oil rub, diaper, and feed
- 10:00 P.M. Diaper and feed
- 2:00 A.M. Diaper and feed (if ordered)

Pediatricians vary considerably in advising the 2:00 A.M. feeding. Many drop it when the baby is two weeks old, or as soon as he has regained his birth weight. Others continue it until the baby is six or eight weeks old. At present the

tendency is to omit the 2:00 A.M. feeding entirely. This enables one to train the infant at the very beginning to sleep from ten or eleven o'clock at night until morning. Always follow the pediatrician's instruction in this, as in other matters.

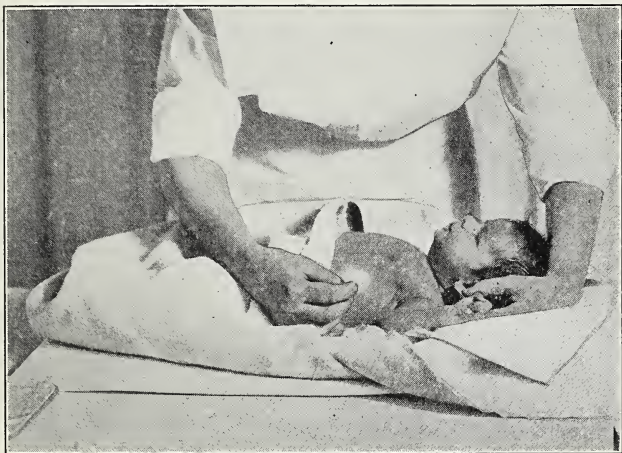
Unless a baby is delicate or quite small, he may be put on a four-hour schedule from birth. Practically all babies are on a four-hour schedule by the end of the second month.

The following is a suggested program for a three-months-old baby on a four-hour schedule:

- 6:00 A.M. Diaper and feed
- 8:30 A.M. Orange juice and boiled water
- 9:30 A.M. Bathe
- 10:00 A.M. Feed
- 10:30 A.M. to 1:30 P.M. Sleep out of doors
- 1:30 P.M. Diaper and feed
- 2:00 P.M. to 5:00 P.M. Sleep out of doors
- 5:00 P.M. Indoor exercises
Tomato juice and boiled water (if ordered)
- 5:30 P.M. Prepare for the night (Sponge bath or oil rub and fresh night clothes)
- 6:00 P.M. Feed
- 10:00 P.M. Diaper and feed

The baby's bath. — During the first ten days or two weeks the infant is given an oil bath or a sponge bath. When a baby is having an oil bath, his eyes, ears, nose, and face are cleaned in the usual way, and then the body is rubbed with warm olive oil. When the baby is to have a tub bath, go first to the bathroom and get everything ready before disturbing the baby. Wear a regular bath apron if you have one (a rubber apron with a bath apron buttoned over it). Arrange the clean

clothes in a convenient place. A small folding rack is useful for this purpose. See that all the buttons are undone, the diapers folded, and the clothes arranged in the order in which they are to be used. The baby's skirt is slipped inside the dress so that they can be put on together. Place the baby's



GIVING THE BABY AN OIL BATH

(Reproduced by courtesy of New York State Department of Health)

towel and wash cloths within easy reach. Fill the rubber tub about two-thirds full of warm water. Test it with a bath thermometer. It should be about 95° F. for the bath, and may be a degree or two higher to allow for cooling while the baby is being undressed. After the third month the temperature can be gradually lowered to 85° or 90° . Place the baby tray on the table and uncover all of the jars. If the baby is to be weighed, put his wrapping blanket or a large

bath towel on the scales and balance them. The temperature of the room should be between 70° and 72° F.

After everything is ready for the bath, get the baby. Undress him and wrap him in the flannel wrapping blanket or large bath towel which was used on the scales when they were balanced. Place the baby on the scales and weigh him.

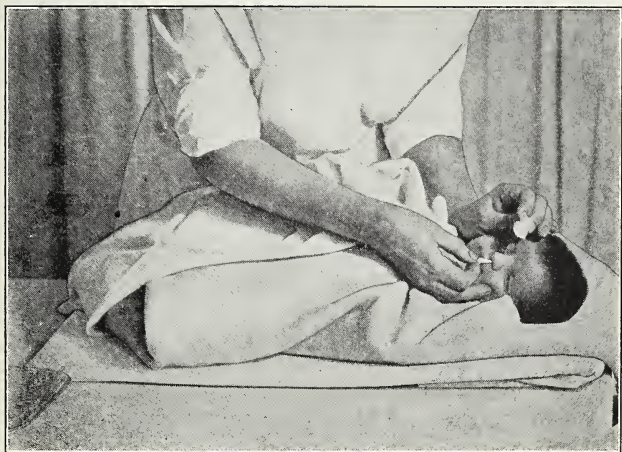
Put him back on the table and keep him wrapped while you clean his eyes, ears, nose, face, and hair. From the baby tray take a cotton pledget and, dipping it into the boiled water, wipe out one eye. Hold the baby's head with your hand and turn it slightly to one side as you wipe the eye from the inner to the outer corner. The baby's head is turned in order to avoid having the fluid run from one eye to the other. Dry the eye with another pledget and then wash the other eye in the same way, using a clean pledget each time. This avoids the possibility of carrying infection from one eye to the other. Although slight inflammation of the eyes is quite common in infants, it should be called to the attention of the physician. If there is a yellow discharge, the doctor should see the baby immediately.

Clean the baby's nose with a twisted piece of cotton, wrung out of water and dipped in albolene. Toothpick swabs may be used, but care must be taken not to injure the mucous membrane. Hold the baby's head when cleaning the nose. The small crevices of the outer ear may be cleaned with a piece of cotton or toothpick swabs dipped in albolene.

The scalp is soaped, washed, and rinsed thoroughly at least two or three times a week. Some babies have a scaly condition of the scalp which is commonly spoken of as a 'cradle cap.' This should be treated in the following manner until it has entirely disappeared. Rub albolene on the scalp every

night. Every morning when bathing the baby, wash the scalp with soap and water. Rinse thoroughly, dry, and again freely apply the oil. The oil loosens the scales so that they wash off readily.

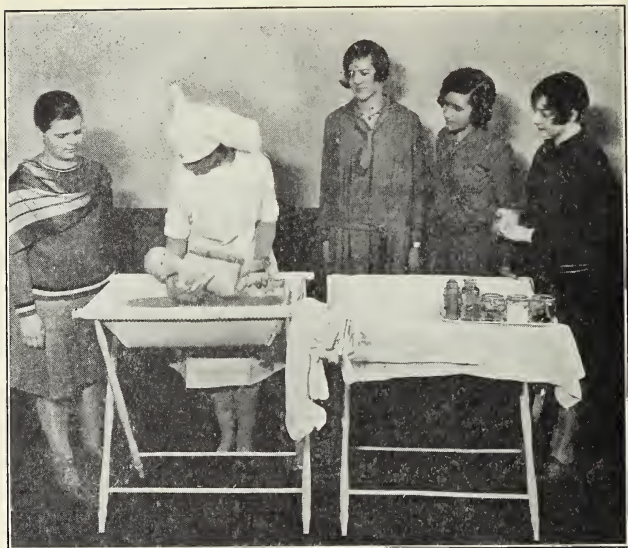
It is easier to soap the baby on the table before placing him



CLEANING THE BABY'S NOSE

(Reproduced by courtesy of New York State Department of Health)

in the tub. To support the baby as you put him into the tub, use your left hand to hold the upper part of the baby's arm farthest away from you, and let his head rest on your forearm, at the wrist. With the right hand, grasp the baby's feet and lift him into the tub. Your left hand should continue to support his head and shoulders while you bathe him with your right hand. Lower him into the water slowly so that he will not be frightened. A new-born baby is less likely to be



LIFTING THE BABY INTO THE TUB

frightened if you place a wet bath cloth over his chest until he becomes accustomed to the feeling of the water around him. Leave him in the tub only three or four minutes — just long enough to rinse off the soap. When the baby is five or six weeks old, pour a little cold water into the tub along the edge away from the baby, just before you take him out. If the baby reacts well to the cold water, he is greatly benefited by it. The pores of the skin are closed, thus lessening the chances of his taking cold. He breathes deeply and expands his lungs, which tends to develop the chest wall. The cold water also trains the skin to react normally to changes in surface tem-

peratures. Lift him out of the tub and wrap him in the blanket or bath towel which you have been using as a cover. Dry him thoroughly. Slide the wet towel out from under the baby and dress him.

Diapering the baby. — The baby should be diapered regularly. This should be done each time that he is picked up



FIRST METHOD OF DIAPERING BABY

for his feeding, orange juice, or exercise period. These times are usually often enough unless the baby is awake and soiled.

There are two methods of folding and putting on diapers. One is to fold the diaper in half or in thirds lengthwise, forming a rectangle almost twice as long as it is wide. Place this under the baby's back and hips lengthwise, with one end at the waistline. Bring the other end up between the thighs. Fold this piece over smoothly and bring the edges of the back piece up over it. Pin at both sides so that the diaper fits snugly around the waist. At the knees draw the back piece

over the front piece and pin them together. If the diaper is adjusted smoothly, it forms a loose bloomer, fitting snugly but comfortably at the knees and around the hips.

The second method is to fold the diaper into a square and then fold it diagonally to form a triangle. Place it under the baby's back and hips so that the point of the triangle can be



SECOND METHOD OF DIAPERING BABY

brought up between the thighs and pinned to the other two ends which have been folded smoothly across the lower abdomen. Pin on either side to make it fit comfortably around the legs.

Each time the diaper is changed the buttocks should be washed with cotton, soap, and warm water, and thoroughly dried. If the buttocks are not irritated, this is all that is necessary, but if the skin is dry and scaly, rub the buttocks well with olive oil or lanolin after washing and drying. Powder should be used only in extremely hot weather.

If the baby's stools have a tendency to looseness, the but-

tocks may become red and irritated. Occasionally diapers which have been washed in strong alkaline soap will cause an irritation. There may be a skin rash if the baby is kept too warm. Thorough cleaning and drying each time the baby is diapered are the surest means of preventing rash on the buttocks. If a slight irritation occurs, wash carefully, as usual, and apply lanolin or a mixture of equal parts zinc-oxide ointment and castor oil. It is beneficial to expose the area to the air as much as possible. Pull the baby's clothes up, unfasten the diaper, and place him on his stomach for several hours a day. If you have reason to believe that the stools are causing the irritation, take the baby to the physician.

Care of the diapers. — A white enameled pail with a cover should be kept in the bathroom for the soiled diapers. Keep it about half full of cold water and drop all wet diapers into it. Keep a long-handled brush in the bathroom and, when the baby has a soiled diaper, brush the stool into the toilet before dropping the diaper into the pail. Each morning, or three or four times a week the diapers are washed and boiled. Only a pure white soap, such as Ivory, should be used. As stated before, a strong alkaline soap will cause a rash on the baby's buttocks. The diapers must be rinsed through three or four waters to free them entirely from irritating substances. Dry them in the sun, if possible.

Fresh air and sunshine. — Sunlight is essential to life. Exposure to sunshine is especially important during babyhood. On pleasant days in the late spring, summer, or early fall, a two-weeks-old baby may be put out of doors on an open piazza to sleep. From six weeks on, all well babies should be put out after the ten-o'clock feeding in the morning and again after the two-o'clock feeding in the afternoon.

If there is no place available out of doors, the baby may sleep on a sun porch. Open the windows wide and roll the crib close to the window so that the sunlight falls directly on the baby. The beneficial ultra-violet rays do not pass through ordinary glass. The baby must therefore be placed out of doors or in an open window to receive the full benefit of the ultra-violet rays. Be sure, however, when you put him in the sunshine that his eyes are protected from the direct rays of the sun.

Sunlight prevents rickets, a disease of early childhood, which is characterized by marked alterations in the bones. Sunlight will also *cure* the disease after it has developed. Rickets is caused by faulty diet and lack of sunshine. It is most common during infancy, especially between the sixth and eighteenth months.

For this reason modern pediatricians advise mothers to give their babies a daily sunbath. When the weather permits, undress the baby and place him on a hard mattress in a basket, crib, or carriage. The lining of the basket or crib will protect him from a direct draft. Put him out of doors or in an open window so that the rays of the sun fall directly on his body. Let him lie first on his stomach and then on his back. Expose each side only a minute or two the first time you put him out. The length of time may be increased gradually. Care must be taken not to expose him long enough to burn his tender skin.

Common sense and judgment must be used when placing a baby out of doors during the winter months. The face of a baby or small child freezes very easily. Avoid putting a baby out on windy, dusty, or extremely cold days. A child under two years of age should never be taken out when the

temperature is below 32° F. Cold cream rubbed on the cheeks will keep the baby's skin from chapping when he is put out of doors during cold weather.

At night the baby's room should be well ventilated. There should not be a freezing temperature, however. Have moving air in the room without having it extremely cold. In cold weather one window or more may be opened a few inches and a board or a screen of cloth or fine mesh wire may be used to protect the baby from drafts. A standing screen placed around or near the crib is useful. The temperature of the room should be about 60° F.; it should never be below 50° F.

Exercise. — The only exercise the baby gets is through crying and aimlessly moving his arms and legs. When he is about six weeks old he should have an indoor exercise period. Remove all his clothes except the diaper and band, and place him in the center of a large bed on a piece of rubber sheeting covered with a quilted pad. This affords an opportunity for free kicking of the legs and moving of the arms. Five o'clock in the afternoon is the most desirable time for this exercise. Allow only ten or fifteen minutes at first because the baby fatigues easily.

There is an undesirable tendency on the part of mothers to play with their babies during the exercise period, and to let visitors come at this time. The exercise period should be for the benefit of the baby and not for the amusement of the mother and her friends. Visitors should be allowed only on rare occasions and they should not be permitted to interfere with the baby's routine. Only one or two should be present at a time and they should make only a brief visit.

Do not tire the baby and excite him by leaning over the bed and talking to him. He likes to entertain himself and will

do so if left alone. Remember that a quiet babyhood contributes to the development of a well-balanced nervous system. All that parents need to do is to give opportunity for the baby to develop the powers within him. This development is hindered if the baby's strength is overtaxed and his efforts frustrated. He is eager to do what he can. He loves to kick and make cooing sounds. During these early months he has to get acquainted with his surroundings, learn to make different sounds with his voice, and gain control over the movements of his legs and arms. Have you ever seen a baby discover his hands? Have you watched him try to direct them to his face or mouth? Spare him from distractions which interrupt this normal development of mind and body, and give him time for the establishment of a stable nervous system.

As the baby grows older, the length of time allowed for the exercise period may be increased gradually. When he is three or four months old he may have two periods, one in the morning before his bath and one in the late afternoon. Watch for signs of fatigue and do not allow him to get too tired. Such a condition is often shown by unusual activity on the part of the child.

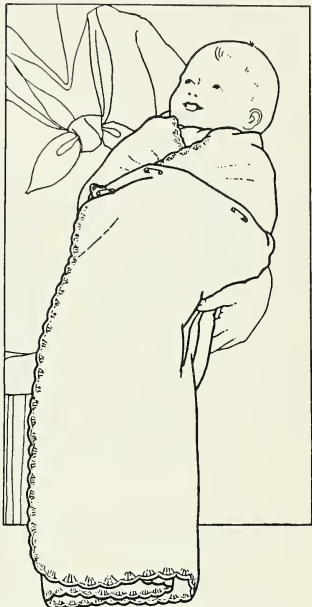
When the baby begins to creep he should have a pen, preferably one with a floor. Put a blanket down, give him only one or two toys, and let him amuse himself. He will have great enjoyment in crawling about and pulling himself up along the sides.

Sleep. — The new-born baby sleeps almost continuously for the first seventy-two hours. As he grows older, he gradually sleeps less. During the first month of life a baby should sleep about twenty hours a day. From one to six months of age, he sleeps about sixteen hours, and from six to twelve

months he sleeps fourteen or fifteen hours. From one year to two years of age, he should sleep fourteen hours out of the twenty-four.

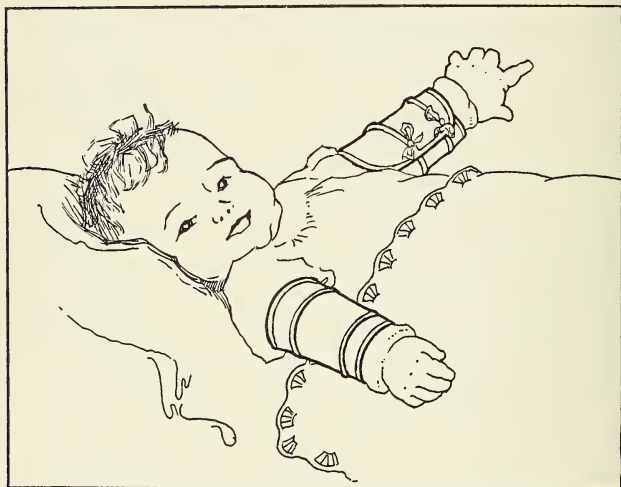
Children vary a great deal in the length of time that they will sleep, but these variations are due largely to improper training which results in poor habit formation. If a baby is comfortable, is properly fed, and has been kept on a definite schedule from the very beginning, he will sleep regularly. It is unnecessary to go tiptoeing about a house when a baby is sleeping. Keep him in a room by himself with the door closed and avoid sudden noises near the room. The ordinary noise about a household does not disturb him unless he has been constantly protected from it.

The baby will sleep better if he is wrapped in a small square of flannel or cheese-cloth (double thickness). This is done to keep his arms close by his sides. The baby should sleep on the right side for one nap and on the left side for the following nap. Changing the position in bed helps to form the head symmetrically. It takes about three months for the bones to harden into permanent shape.



The picture will show you the best method of wrapping a baby in a blanket.

After the baby is seven or eight months old, his night-gown should be pinned to the foot of the bed or mattress, and the covers should be secured with large horse-blanket pins.



CUFFS TO PREVENT THUMB-SUCKING

When putting the baby to bed, furnish an atmosphere which is conducive to sleep. This is no time for play or excitement.

In the training of the baby, bear in mind that *the first six months form the foundation period of his mental life*. Give him the environment and opportunities needed for developing habits which lead to normal growth and happiness. Sleep, quietness, and relaxation are important factors.

Thumb sucking. — The new-born infant sucks indiscriminately everything which he can get into his mouth. He should be protected from situations which encourage this sucking instinct. Babies should never be given pacifiers or rubber nipples to suck.

Excessive thumb sucking may change the shape of the mouth by elongating the roof and causing the gums to protrude. It may lead to infection in the mouth or in the adenoids and tonsils. It often leads to digestive disturbances. It spoils the shape of the thumb. No parent should allow a baby to form the thumb-sucking habit.

There are many ways of preventing the development of this bad habit. When the baby sleeps, pin him in a wrapping blanket and see that the bedclothes are secure. During the exercise period his hands may have to be tied loosely to the bed with tape. The tapes should be long enough to allow free motion of the arms but short enough to prevent him from putting his fingers into his mouth. Cuffs made of cardboard covered with muslin and tied over the elbows allow movement of the arms and keep him from sucking his fingers.

REVIEW

1. Discuss the advantages of keeping a baby under the care of a good pediatrician.
2. Where can reliable literature in regard to children be secured? Where can mothers have their babies weighed and examined free of charge?
3. Why is regularity so important in carrying out the baby's daily routine?
4. How often should a baby be weighed? How is he prepared? When is the best time for weighing?
5. How would you treat a cradle cap?

6. What is the surest means of preventing rash on the buttocks?
7. How should the diapers be cared for? How should they be washed?
8. Why is exposure to direct sunlight so essential during babyhood?
9. How would you prepare a baby for a sunbath? How long would you expose him?
10. Discuss the ventilation of a baby's room.
11. Describe the exercise period. How should the creeping baby be given a free exercise period?
12. Discuss the methods of training a baby to sleep regularly.
13. Why should the baby be protected from the thumb-sucking habit?

SUGGESTED ACTIVITIES

1. Add pictures to your scrapbook to show the baby's bath and the sunbath.
2. Print a daily program for a baby on a three-hour schedule and for one on a four-hour schedule. Paste them in your scrapbook.
3. Make a list of the articles needed for a baby's bath.
4. If you have the infant-sized doll in your classroom, practice bathing it.
5. Demonstrate the two methods of diapering a baby.
6. Make a 'cuff' for the doll.
7. Demonstrate the method of preventing thumb sucking.
8. Your teacher may work out a method of giving special credit to the girls who arrange to bathe and dress the baby of a relative or friend each week-end for one month.

CHAPTER XX

FEEDING THE BABY

Breast feeding. — The natural and ideal food for a baby is its own mother's milk. A breast-fed baby has a better chance to live and is less susceptible to infection than one that is bottle-fed. About ninety per cent of all baby deaths under a year of age occur among bottle-fed babies.

There are few cases where a mother is actually unable to nurse her baby. A great many mothers are not willing to make the necessary sacrifices in order to be able to nurse their children. If a normal woman eats properly, lives on a reasonable routine, and makes an effort to accept the situation calmly, she will usually have enough milk to feed her baby.

During the first few days after the baby is born the breasts secrete a thick yellow substance called colostrum. This is different in composition from the milk which is secreted later. It is beneficial to the baby because it acts as a laxative. After four or five days the colostrum gradually changes to normal milk.

Doctors vary as to their opinion on the interval between feedings. The baby should be fed regularly, however, whether he is on a three- or a four-hour schedule. The four-hour interval gives the mother time to carry on her duties and get out of doors every day. After the baby is six weeks old, the pediatrician will usually permit the bottle to be substituted for one breast feeding each day. This allows the mother a longer interval of freedom from the baby and en-

ables her to seek recreation outside of the home. It also accustoms the baby to taking food from a bottle, and this is a great help in case the baby has to be put on artificial feedings.

When the mother's supply of milk is sufficient, the breasts should be used alternately, one at each feeding. The baby is put on one breast and allowed to nurse fifteen or twenty minutes. In this way the breast is completely emptied and the glands are thus stimulated to secrete more milk. At the next feeding the baby is put on the other breast. If the right breast is used at 6:00 A.M., the left one should be used at 10:00 A.M. When there is not enough milk and both breasts have to be used, leave the baby on the first one until it has been completely emptied (twelve or fifteen minutes), and then put him on the other breast for about five minutes. The next time, alternate the baby's positions, placing him first at the breast upon which he nursed last at the previous feeding. A baby should not be allowed to nurse more than twenty minutes. Something is wrong if it seems necessary for him to spend more than twenty or thirty minutes at a feeding.

How to determine whether a baby is getting enough food. — If a baby is gaining in weight, sleeps well, and seems contented, it is evident that he is getting a sufficient amount of milk. If he cries half an hour or so before each feeding and is not gaining, it may mean that he is not getting enough food. In this case the baby should be weighed before and immediately after each feeding for one entire day in order to determine the exact number of ounces of food he is getting in twenty-four hours.

Fifty calories of food per day are needed for each pound of weight. An ounce of milk furnishes twenty calories. One method of determining the amount of milk required by a baby

in twenty-four hours is to multiply the baby's weight by 50 and divide the result by 20. Then divide by the number of feedings per day and you have the number of ounces needed at each feeding. For example: suppose that the baby's weight is 8 pounds; $8 \times 50 \text{ calories} = 400 \text{ calories}$ needed by the baby in twenty-four hours; $400 \text{ calories} \div 20 \text{ calories} = 20$, the number of ounces of milk needed per day. If the baby is having 5 feedings, divide 20 ounces by 5, and you have 4 ounces as the amount of milk needed at each feeding.

When weighing the baby to determine how much breast milk he is getting, he must be weighed both times in the same clothes and blanket. If he weighs 10 pounds and 2 ounces before nursing, and weighs 10 pounds and 8 ounces immediately afterward, you know that he got 6 ounces of milk from his mother.

The amount obtained may vary at different feedings. The amount of milk required increases as the baby's weight increases.

Supplementary feedings. — When the mother is unable to give the baby as much milk as he needs, the doctor usually orders a formula to be given immediately after each nursing. In other words, the baby gets all that he can from his mother and takes only enough of the formula to bring the feeding up to the amount he needs. When these supplementary feedings are necessary, the baby should be weighed before and after feeding to determine the amount of the formula needed. If the baby nurses well, it is sometimes sufficient to let him take enough of the formula to satisfy him without regard to amount.

Artificial feedings. — The best substitute for mother's milk is modified cow's milk. The pediatrician always orders

the proportion to be used in making the formula and gives the general directions for preparing it.

Grade A certified milk is highly recommended for babies and small children. Certified milk is raw milk which is clean and free from disease-producing bacteria. The greatest care and cleanliness are observed in its production, and it is delivered within a limited time after it has been milked. Certified milk is more expensive than ordinary milk but it is the safest kind to use for making formulas.

Even though the milk is certified, most doctors order it to be pasteurized or boiled for three minutes or more before using it in a formula. Always follow the doctor's instruction in regard to the kind of milk to buy and the preparation of the formula.

Sometimes, in extremely cold weather, milk is partially frozen when it is delivered. Such milk should not be used for the baby if it can be replaced with a fresh supply. Babies are frequently made ill by taking frozen milk. If you are obliged to use it, remove as much of the cream as possible and boil the milk five or ten minutes. This lessens the danger of its disturbing the baby.

The following articles are needed for preparing a formula in the home. They should be kept in a place by themselves and used *only* for preparing the baby's formula.

Six or eight nursing bottles

Six or eight nipples

Corks or rubber stoppers for bottles

Bottle brush

Wire bottle rack (preferably two, one for bottles containing the formula and one for empty bottles)

Graduated pint or quart measuring glass

Enameled pitcher, quart size

Funnel, medium size

Tablespoon

Double boiler

Large covered kettle for boiling bottles (fish kettle or pasteurizer)

Cream dipper

Large tray

Small teakettle (convenient but not essential)

Double thickness of cheesecloth

There are two types of nursing bottles: those with wide mouths and those with small necks. Either type may be used satisfactorily if the bottles are cared for properly.

The Walker-Gordon bottle is perhaps the best of the small-necked shape. Of the wide-mouthed type, the Faultless Nurser is the best because of the soft, perfectly shaped nipple which comes with it. When the wide-mouthed bottles are used, rubber caps must be bought to use as stoppers.

Bottles should be rinsed with cold water immediately after each feeding. Then they are filled with cold water and set in a rack until it is time to prepare the formula the next morning. At that time they are washed with the bottle brush in hot soapy water, thoroughly rinsed, and put on the stove in cold water to boil. Allow them to boil for five minutes and let them cool before placing them in the rack and putting in the stoppers. Sterile cotton may be used for stoppers in the small-necked bottles. Baby bottles should never be washed in dish water.

Nipples are also rinsed in cold water immediately after each feeding, then scrubbed with the brush in hot soapy water, thoroughly rinsed, and boiled for three minutes. The nipples are boiled separately, and are kept in a small, covered, sterile

jar in boiled water. A second covered jar is needed for the used nipples. Wide-mouthed jelly glasses with covers make satisfactory nipple jars.

Preparation of the formula. — The full quantity of milk which the baby requires in twenty-four hours is prepared at one time and poured out into separate bottles according to the amount needed for single feedings.

For example, suppose that a baby has five feedings and gets six ounces each time. Thirty ounces are prepared according to the formula prescribed by the doctor, and five bottles are filled with six ounces each. The milk is usually prepared in the morning before the baby's bath or immediately after the ten-o'clock feeding.

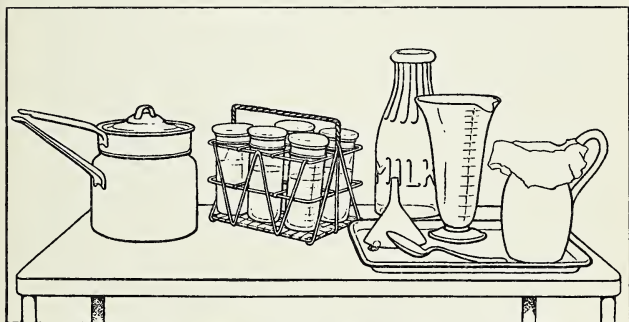
Everything which is used in preparing the formula is scrubbed and put on in cold water to boil for five minutes. Fill the small teakettle and let it boil for twenty minutes, making the water sterile. If you are using whole milk, turn the bottle upside down so that the cream content will be mixed through the milk. Wash off the mouth of the milk bottle before removing the cap. If the doctor has ordered you to boil the milk, pour the proper amount into the double boiler. Put cold water into the lower part of the boiler and set it over the flame until the water has boiled from six to ten minutes as specified by the doctor. Milk may also be boiled directly over the flame.

Scalding is another method of destroying germs in milk. Pour the milk into an open vessel and set it over the flame until the bubbles appear around the edge and the milk steams in the center.

Measure out the amount of sugar specified and put it into the sterile mixing pitcher. A tablespoonful always means a

level tablespoonful. Dextri-maltose or Beta lactose sugar is ordered more commonly than cane sugar.

The sterile water is measured out while hot and added to the sugar. Then the boiled milk is strained through the cheesecloth into the pitcher and the mixture is stirred thoroughly. If the milk is used raw or if the formula is to be pasteurized, let the water cool before adding the cold milk.



ARTICLES NEEDED FOR MAKING A FORMULA

When the formula is complete, measure out the amount specified for each feeding, pour it through the funnel into the nursing bottles, and place them in the rack. Stopper them at once and set them in the ice box as soon as they are cool.

Wash all the utensils, place them on the tray, and set them away in a clean cupboard. The empty rack, jar of clean nipples, and the jar for used nipples are kept on a tray in the nursery.

When the formula is to be pasteurized, the raw milk is added to the sterile water and sugar, measured off into the separate bottles, and placed in the rack. The rack is then put into

a kettle filled with cold water which comes to a level slightly above the top of the milk in the bottles. The water is allowed to come to the boiling point. The kettle is then removed from the fire, covered tightly, and the bottles are allowed to stand in it for twenty minutes. Remove the bottles and, when they have cooled sufficiently, place them in the rack in the refrigerator. Many excellent pasteurizers for the home can be purchased. The one known as Freeman's Pasteurizer is a good one.

Feeding the baby. — When it is time for a feeding, take one of the bottles from the refrigerator, remove the stopper, and adjust the nipple without touching the mouthpiece. Set the bottle in a small pitcher of warm water to bring the milk to body temperature. Diaper the baby and leave him on the table with a small pillow under his head and shoulders. Hold the bottle in a slanting position to feed him. Always test the temperature of the milk by shaking a few drops on the inner side of the wrist to make sure that it is not too warm. The bottle should be held constantly in a slanting position which keeps the neck of the bottle and nipple full of milk. If this is not done, the baby will suck in air as he nurses. Never prop a bottle and leave the baby alone while he is nursing. Keep him awake and watch to see that he continues nursing. It is important not to let him take the milk too fast, but on the other hand, he should not spend more than twenty minutes at a feeding. If he refuses part of the milk, throw it away. Milk is never saved and warmed over for another feeding.

Whether a baby is breast-fed or bottle-fed, he will suck in a certain amount of air while taking his food. At the end of the feeding, hold the baby upright against your shoulder and



HELPING THE BABY TO RAISE AIR BUBBLES

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pat him gently on the back to help him raise any air which he has swallowed. You may sit him upright on your lap while patting him. When a baby cries immediately after his feeding, it is often because the mother or attendant has failed to help him raise the air bubbles properly and completely.

Never rock a baby or play with him after a feeding. It may cause him to spit up part or even all of the milk which he has just taken. Wrap him in his blanket and put him down in his crib quietly.

Water. — Most babies require a certain amount of cooled, boiled water between feedings once or twice a day. The water can be boiled at the time the formula is made and poured out into two or three small four-ounce bottles. Stopper the bottles and place them in the rack which is kept in the nursery for used nursing bottles. The water is warmed in the same way as the milk and is given in the same manner. Water is usually given in the morning an hour and a half before the ten-o'clock feeding. Never give water within an hour before or after the feeding time.

Beginning twelve hours after birth, the baby is given an ounce or an ounce and a half of boiled water every three or four hours until he begins to get milk from his mother. The doctor may order a lactose solution (a mixture of lactose sugar and sterile water) to be given during these first days. Either the water or the lactose solution will greatly reduce the initial weight loss of the baby.

Orange juice. — Babies who are being brought up on artificial feedings and are getting boiled or pasteurized milk are given orange juice to prevent the development of scurvy. The orange should be washed and wiped on a clean towel before squeezing it. It is sometimes given to babies as young as six weeks. Nearly all babies take orange juice by the end of the second or third month. The juice is carefully strained and given from a bottle either plain or diluted with water. One tablespoonful once a day is enough at the start. It may be gradually increased to half an ounce or a full ounce

by the sixth month. As an alternative the same amount of tomato juice may be given as a substitute for orange juice.

Cod liver oil. — Artificially-fed babies are given cod liver oil and sunbaths to prevent rickets. The doctor will give specific instruction as to the kind of oil, the amount to be given, and the age at which to give it.

Colic. — A baby often cries from gas and distention caused by air which has been swallowed during nursing or thumb sucking. This form of colic can usually be relieved by holding the baby in an upright position and patting him on the back. An hour or more after feeding, warm water or warm water with half a soda mint dissolved in it may be given. If you then hold the baby up against your shoulder, he is usually able to raise the gas.

When gas is passed from the bowels, it usually indicates a digestive disturbance. This may be due to one or more food elements, irregularity in the diet, rapid feedings, chilling, or fatigue. The simplest treatment is to give hot water by mouth or apply heat to the abdomen by means of a hot-water bottle. If the colic persists, it may be relieved by the use of a glycerine suppository or an enema of warm water.

When giving an enema to the baby, use about eight ounces of warm, soapy water at 110° F. The baby should be protected from chilling and laid on a small bedpan with his legs wrapped in a diaper or small blanket. A folded diaper is placed on the pan where the baby rests against it. A rubber ear syringe should be used when giving an enema to a baby. Squeeze the bulb slowly and give just enough water to start the bowels moving.

REVIEW

1. What is the ideal food for a baby?
2. What is the usual feeding schedule for a new-born baby?
A three-month-old baby?
3. Describe the methods of determining whether a baby is getting enough food.
4. How is a baby weighed before and immediately after a feeding? Why is this done?
5. What is meant by supplementary feeding? When is it given?
6. What is the best substitute for mother's milk? What kind of milk should one buy for a formula?
7. How should the utensils used in making a formula be cared for?
8. Describe the proper care of bottles. Of nipples.
9. Describe the method of preparing a formula.
10. How should a bottle be given to a baby?
11. What should be done to help a baby raise the air which he swallows during a feeding?
12. How often does a baby require water? How is it prepared?
13. Why is water or lactose solution given to the new-born baby?
14. Why is orange juice given to babies? How and when is it given?
15. Why is cod liver oil given to babies?
16. What causes colic? How may it be relieved?

SUGGESTED ACTIVITIES

1. Add to your scrapbook any material suggested by this chapter.
2. If you have scales in your classroom, demonstrate how to weigh a baby before and after a feeding.

3. Prepare a formula. (Perhaps you can actually help an older sister or a friend prepare a formula for her baby.)
4. Demonstrate the method of giving a bottle to a baby.
5. Demonstrate the method of giving an enema to a baby.
6. Your teacher may give special credit to girls who care for babies outside of school hours.

CHAPTER XXI

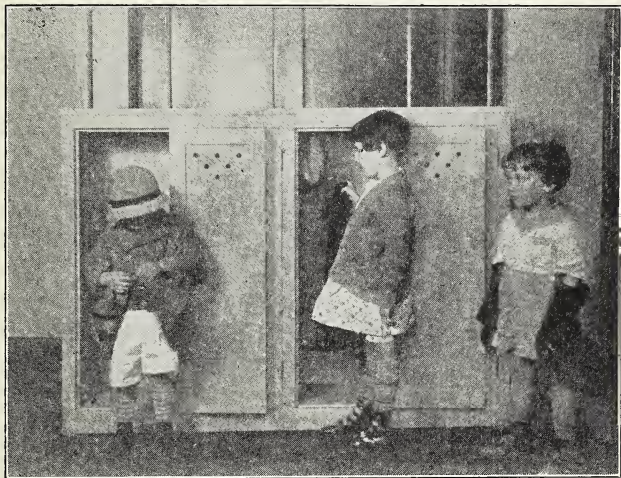
HOME CARE OF THE RUNABOUT CHILD

At school age one child talks baby talk, sucks his thumb, cries easily, and shows little or no interest in his surroundings. Another child of the same age speaks as plainly as an adult, does readily and eagerly what he is asked to do, and has a keen, independent air about him. In the home one child eats what is set before him without question. Another fusses and makes a scene every time he is given a new food. What causes these differences? Can the runabout child (that is, the child between one and a half and five and a half years of age) be influenced to develop attractive, healthful, beneficial habits of thought and action?

There is no period in life when growth is so rapid as during the first six years, and at no other period in life does the child have so many and such varied things to learn.

When one is studying a new language or has been ill and has to learn to walk again, he realizes what difficult things the young child learns to do. Before the child is six years old he has learned to observe, to distinguish sounds, to use his hands, to sit erect, to walk, to understand language, and to talk. He has acquired habits which greatly influence his whole life. He has even established his own way of meeting disappointments, pleasures, and play situations. Never again will his mind, his body, and his habits develop so rapidly. On this account the preschool period is one of distinct importance in the child's development.

During this period the baby learns from experience, by seeing, hearing, touching, and especially by doing. He learns to judge size, shape, and texture by close examination with his hands and eyes. For example, he sees a pair of bright shining scissors on a table. His curiosity urges him to in-



CHILDREN LIKE TO DRESS THEMSELVES

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vestigate the beautiful object. If it is whisked out of his sight, his curiosity about it goes unsatisfied, and the next time he sees it he will grab for it hastily and may injure himself. The mother should allow her baby to examine such things under her supervision. Let him touch the scissors and learn that they are cold, hard, and sharp. When his curiosity is satisfied, his interest will disappear. Remember that a child's

curiosity, his urge for first-hand information, is the thing which develops his mentality and leads him on in search of new knowledge.

Again, the baby can learn to manage his body only by scrambling and climbing about. He loves to creep up the stairs. Is it right to deny him the opportunity to learn merely because it takes time and care to teach him? Let him crawl up two or three stairs at a time. Sit just below him, ready to assist if he needs your help. It is surprising how quickly a baby learns to crawl up and down the stairs.

Allow the creeping or walking baby to have freedom in his own domain, however limited it may be. If he is kept in a pen, give him two or three simple toys and let him entertain himself. If possible, turn him loose in his own nursery and let him examine and discover things for himself.

Let him develop independence in habits as quickly as he is able. Eight-month-old babies can be taught to hold their own bottles. Fourteen-month-old babies can be taught to feed themselves and to drink from a cup. In the nursery schools, eighteen-month-old and two-year-old children carry their little trays of food to a table, sit down on little chairs, and feed themselves. They spill a little at first, of course, but they soon learn to hold the trays steadily. A child becomes very efficient with his hands if he is taught to feed and dress himself during these early years.

From the very beginning, teach him to put his toys in a basket when he is through with them. A baby imitates very quickly and responds readily to exclamations of praise. Guide him and help him at first. When he succeeds in imitating you, clap your hands heartily and praise him. Soon he will enjoy picking up his toys alone.

A child learns to speak by hearing older persons talk. If you want him to speak correctly and you wish to make the task easy for him, use correct forms and intonations. Do not use baby talk. If you were learning to speak French, you would not profit by having your teacher copy your mistakes instead of speaking the correct form for you to imitate.

When a child is two or three years old, he needs the companionship of children of his own age. In that way he learns how to give and take fairly. A four-year-old child may boss a two-year-old or the two-year-old may be permitted to have his own way because he is the baby; but when children of the same age meet, they are on an equal footing.

If a child is to enjoy a wholesome, happy childhood, he must have freedom of speech and action. Stress the things which you wish him to remember and desire him to do. If you praise his success, he will make every effort to please you. Let him learn from experience. Always answer his questions frankly and honestly. Never make a promise which you may be unable to keep.

Feeding the runabout child. — A small child should not eat at the table with adults. There is too much excitement and confusion for him. A separate table also avoids the possibility of having older persons offer him foods which he should not have. The child who has never tasted anything but his own food does not expect anything except what is given to him. If children act badly about food and are constantly begging for foods which they are not supposed to have, it is because they have been poorly trained or spoiled by adults.

Notwithstanding all opinion to the contrary, children do not tire with the sameness of food, especially if they have always been kept on a routine diet. A loss of appetite means that

the child is ill or is physically or mentally overtired. Cut down on the amount of food if you would correct the cause of the trouble.

When a child is unwilling to eat a new food, be certain that you have removed all fear concerning it before you insist upon his taking it. Taste it yourself and assure him that it is good. If you have always told him the truth, he will believe you. Once you are certain that he understands that



CHILDREN IN A NURSERY SCHOOL

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the food is all right, insist gently but firmly upon his eating it. If he persists in his refusal, tell him that you are sorry but that he cannot have anything else to eat until he first eats the article in dispute. Do not discuss the matter further. At the next meal again offer the rejected food. Do not scold the child, but merely tell him quietly that he must eat the food because he needs it to make him grow. Tell him that it is good, that you like it, and that he cannot have anything else until he eats it. Going without a meal or two will not hurt

the child in the least, except to make him cross for that day. It is better to have him form the right attitude toward new foods at the outset, even if it does cause a little upset in disposition, than to argue and persuade at every meal time. As soon as he understands that you mean what you say and that you can be relied upon to tell the truth, he will trust you and be willing to do what you ask. When he finally accepts the food, praise him and show how pleased you are.

Young children should have a light supper. Meat, eggs, and vegetables should not be given for the evening meal until the child is at least six years old. Children sleep better when they have a light meal at night.

Children get all the sugar they need from fruit and starches. Starches are changed to sugar before they are absorbed by the body. Many children suffer from indigestion because they are given so much sugar in various forms that the body cannot absorb it fast enough. A little sugar may be used in the preparation of certain foods, but should not be put on the food after it is served. If children have never used sugar on cereal, they prefer it unsweetened when they are older. A wise parent who has the best interests of the child at heart will give little candy, cake, ice cream, or pie until the child is ten or twelve years old. Children should have few or no sweets until after they are six years old, and then only immediately after meals. The diet for a two-year child should be selected from the following foods:

Zwieback	Beef juice	Prune juice and pulp
Stale bread	Chicken broth	Apple sauce
Toast	Soft-boiled egg	Baked apple
Milk toast	Coddled egg	Baked custard
Crackers	Milk	Junket

Oatmeal	Butter	Jello
Cream of wheat	Scraped beef	Baked potato
Ralston	Boiled chicken	Plain macaroni
Farina	Orange juice	Roasted chicken
Rice	Tomato juice	Mutton chop
Mutton broth	Spinach, carrots,	Lamb chop
Beef broth	peas, beets *	Wax beans

The following gives a suggested feeding schedule for one day:

- 6:00 A.M. Milk: 8 to 10 ounces
- 8:00 A.M. Breakfast: Cereal, toast, egg yolk, milk (8 ounces)
- 10:00 A.M. Orange juice
- 2:00 P.M. Dinner: Broth, beef juice, meat, or chicken
Baked potato, macaroni, or rice, carrots, peas, wax
beans or beets
Custard, junket, Jello, or baked apple
Milk (4 to 6 ounces, as desired)
- 4:30 P.M. Tomato juice
- 5:30 P.M. Supper: Cereal, milk toast, simple sandwich
Prunes, apple sauce, or baked apple
Milk (8 ounces)

When the child is two and a half years old, the following foods may be added to his diet (the feeding schedule remains the same):

- A variety of vegetables * which have been rubbed through a colander
- Mashed, creamed, or boiled potato
- Plain blanchmange
- Plain tapioca pudding

* Pure strained vegetables are now available in canned form.

Bread pudding
Cornstarch pudding
Baked ripe banana

At three years of age, the following foods may be added to the list. At this age the child has only three meals a day with a luncheon of milk and crackers in the middle of the forenoon before his midday nap.

Boiled or broiled fish, such as cod or halibut
Roasted meat
Shredded wheat
A greater variety of vegetables
Cooked peaches
Cooked pears
Plain cookies

The following is a suggested food schedule for a child from four to six years of age:

7:30 or 8:00 A.M.	Breakfast:
	Cereal
	Toast
	Egg
	Milk
11:00 A.M.	Luncheon:
	Milk and crackers
1:00 or 2:00 P.M.	Dinner:
	Broth or soup
	Meat or fish
	Potato, macaroni, rice, or bread
	Green vegetable
	Dessert or fruit
	Milk

5:30 or 6:00 P.M. Supper:

Cereal or simple sandwiches

Bread and butter

Cooked fruit

Milk or hot cocoa

Meat and egg should be given only once a day. The egg should never be fried or made into an omelette. It is safer to give an egg for breakfast than for supper. Continue using only simple desserts and cooked fruits. Give cooked cereal, making an exception only of shredded wheat. Cheese, peanut butter, and more of the vegetables may be added during this period.

Teeth. — The child should be taken to the dentist when he is about three years old, and should make a visit regularly every six months thereafter. It is just as important to care for the temporary teeth as for the permanent teeth. If the temporary teeth are not cared for, decay may develop and the baby teeth will fall out before the permanent set is ready to come through. Under such conditions, the jaws fail to develop properly with the result that the permanent teeth have too little room and are therefore irregular in arrangement. Teach the child early in childhood to brush his teeth and gums and rinse his mouth.

Calcium in food is essential for the building of all bony tissues, such as bones and teeth. If a child is to have beautiful, hard teeth, his diet must furnish the body with a liberal amount of calcium. Only a few foods are rich in this substance, and a careful selection must be made in order to supply the required amount. Whole milk is the richest source of calcium. This is one of the reasons why a growing child needs a quart of milk each day. Green vegetables, fruits,

and whole-grain foods also furnish calcium and the vitamins necessary for use by the body.

Sleep and rest. — Between the ages of two and five years, a child needs from eleven to fourteen hours of sleep each day.



THE RUNABOUT CHILD IS VERY ACTIVE

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He should be in bed every evening by six o'clock and should have a nap during the daytime. The runabout child usually sleeps better during the rest period if he spends all the morning out of doors and is then put to bed for his nap about half-past eleven or twelve o'clock. He gets up just before his dinner at half-past one or two and is kept up until bedtime at six.

The runabout child is extremely active. He is constantly in motion and is more or less in a continuous state of nervous tension. He is easily exhausted, both physically and nervously. Fatigue accounts for many of the digestive disturbances of childhood. For this reason, the midday rest period should never be omitted before the child is old enough to enter school. He should be undressed and put to bed in a darkened room and kept there whether he sleeps or not. He should never have toys or books at this time or at bedtime. The rest period at the middle of the day should be continued for children up to the age of ten or twelve years during the summer months when they are out of school and are so active.

Baths. — The runabout child should have a daily cleansing bath either in the morning before breakfast or in the evening before supper. It is well to finish the bath with cold water splashed over the body.

Many pediatricians believe that the child should not be allowed to bathe in the ocean before he is five or six years old, except to paddle about in the shallow water. Children under twelve should not go into the water more than once a day. Most doctors feel that a great deal of harm is done by allowing children to play indefinitely in cold water. On the other hand, playing in the sun on the beach in a bathing suit is very healthful because of the exposure to the sun.

Illnesses of childhood. — A mother should be able to recognize the important symptoms of illness in a child without being too apprehensive. A small child runs a high temperature very easily. If a child appears to be ill, use a rectal clinical thermometer and take the temperature. During an acute illness, omit all solid foods, especially fats. A baby

should be given nothing except water until seen by a doctor. The runabout child may be given diluted milk or skimmed milk, clear broths, fruit juices, and baked custards. During an illness always give as much fluid as possible, especially water.

When a child has a high temperature, frequent vomiting, a steady loss of weight, or frequent loose stools, call a physician.

Convulsions. — A baby is very susceptible to convulsions because of his delicately adjusted, unstable nervous system. Convulsions may occur with most of the acute diseases of infancy and early childhood. As explained in a previous chapter, a convulsion is a twisting or jerking of the muscles, and it may be either general or local.

The physician should be called at once. While you are waiting, undress the baby and hold him in a tub of warm water. The temperature should be about 110° F. Be certain to test the water lest, in the excitement, you may burn the baby. Leave the child in the tub for about ten minutes. Take great care to keep the baby's head out of the water. Then wrap him in warm blankets, put a hot-water bottle at his feet, and keep him quiet. One or two tablespoonfuls of mustard may be added to the bath. If the doctor cannot come at once, ask him what you can do for the baby.

While the baby is having the convulsion, note its extent and whether it is more marked on one side than on the other. Place a spoon or a small clean stick or pencil between the gums or teeth if necessary. Give nothing to the child by mouth until the doctor has seen him.

Croup. — During early childhood many children are subject to attacks of croup each winter. The disease is alarming because the child is so distressed and, in severe cases, he has

great difficulty in breathing. Croup is characterized by a sharp, dry, barking cough. The onset is usually sudden.

In general the treatment consists of furnishing warm, moist air for the child to breathe. If the room is small, a large, open kettle of boiling water on an electric plate may furnish enough moisture. If not, the use of a croup tent or an inhalation may be necessary. An inhalation may be given by using one teaspoonful of compound tincture of benzoin to a quart of boiling water.

A croup tent may be arranged by opening a large umbrella and spreading a blanket over it. A kettle or pitcher of boiling water is placed on a chair beside the bed so that it is enclosed under the blanket. If necessary, use a paper funnel. The steam soon lessens the child's distress.

Wine of ipecac or sirup of ipecac is often ordered to relieve croup. Hot applications to the throat or a hot mustard bath may be ordered. A child with severe croup should always be under the care of a doctor.

Communicable diseases of childhood. — The common communicable diseases of childhood are smallpox, diphtheria, measles, chickenpox, scarlet fever, and whooping cough. Because of the severity of these diseases and the serious complications following them, it is important to keep young children from having them if possible. All of these illnesses are more serious during the preschool period than they are at later periods. The old idea that children had better have these childhood diseases as early as possible is entirely wrong. At the present time there is an excellent possibility of avoiding all of these, except measles. With the continued development of public-health activities, the time may come when children will not have these diseases.

The responsibility for the spread of the communicable diseases of childhood rests largely with the mother. Smallpox and diphtheria are definitely preventable. Every child should be immunized against them at one year of age. Whooping cough is one of the most dangerous diseases for a baby or young child. Every effort should be made to protect him from it.

The early symptoms of these diseases are very similar. The most obvious signs are running nose; watery, inflamed eyes; sore throat; fever; vomiting; rash or eruptions on the skin; and possibly a chill. Sometimes the symptoms appear slowly, and at other times the onset is sudden. When a child shows such symptoms, he should be kept to himself and a physician should be called.

The incubation period and the isolation period vary with the different diseases. Directions for isolation technique have been given in a previous chapter.

Colds. — Every effort should be made to protect the baby and runabout child from colds. Avoid direct contact. When any member of the household has a cold do not permit him to come near the children. If the mother or the person who looks after the children has a cold, she should turn her duties over to someone else until she has fully recovered, if this is possible. If she is unable to make such an arrangement, she should wear a mouthpiece. She must keep her hands away from her face and scrub them carefully before touching the children or anything belonging to them.

Children are very susceptible to colds because the mucous membranes of the nose and throat are so delicate. Sudden changes in temperature, overheating, or sudden chilling are conducive to colds. Many mothers keep babies and small

children dressed too warmly. Give due consideration to the outside temperature and to the activity of the child. As soon as the child has his outdoor wraps on, take him out of doors; don't allow him to play about the house for ten or fifteen minutes before going out. If he plays in the house with his wraps on, he is likely to become overheated and then to chill when he goes out if the outside temperature is low. When he comes in, remove his wraps immediately.

The temperature of the house and nursery should never be kept above 68° F. Children who live in overheated houses are much more susceptible to colds than those who live in cool houses. When a child is breathing air heated to 72° or 80° F. and then steps out of doors into air at a temperature around 30° F., there is a cooling or chilling of the mucous membranes of the nose and throat which is conducive to contracting colds.

With proper training, the body is able to adjust itself to surface temperatures. The following practices will help the child to make such an adjustment and thereby avoid colds: living in cool, well-ventilated rooms; removing outdoor wraps immediately upon coming indoors; dressing in such a way that the body is not overheated during periods of active play; and daily having cold water splashed over the body after the cleansing bath.

At the first signs of a cold the child should be kept in bed. Water and fruit juices should be given freely. Keep the temperature of the room at 56° to 68° F. Give a laxative. If necessary, use drops of albolene in the nose. See that the child blows only one side of his nose at a time and that he does not blow too vigorously. If he has a high temperature, call the physician. If the child has chronic colds, he should be

examined for enlarged or infected tonsils and adenoids. Common colds may bring about serious complications unless the child is properly treated. One should never be indifferent to the early symptoms of a cold.

REVIEW

1. In what period of life is development most rapid? Who teaches the child during this period?
2. How does the baby learn? What natural tendencies can be made use of in guiding his education?
3. How does a child become efficient with his hands? How does he learn to speak correctly?
4. Why does the runabout child need the companionship of children his own age?
5. What attitudes of the mother toward the child are particularly important? In teaching him what points should she stress?
6. When are character traits and mental habits established?
7. Discuss the important points in feeding the runabout child.
8. How should a child be supplied with the sugar he needs? What are the dangers of giving sweets?
9. Why is it important to see that the temporary teeth are well cared for? What should this care consist of?
10. How much sleep and rest does the preschool child need? Why?
11. What are the important points to remember about the illnesses of childhood?
12. What would you do for the baby having a convulsion?
13. Give the general treatment for croup.
14. Is it necessary for children to have the communicable diseases of childhood? How may they be protected from them?

15. When should a child be immunized against diphtheria and smallpox?
16. How may the runabout child be protected from colds?

SUGGESTED ACTIVITIES

1. Add to your scrapbook pictures showing the normal activities of the preschool child.
 2. Make posters showing the feeding schedule and a one-day menu for the two-year-old child. For the three-year-old child.
 3. Make a croup tent.
 4. Write essays discussing the prevention of colds.
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CHAPTER XXII

PERSONAL HYGIENE OF CHILDHOOD AND YOUTH

To the individual, health means a better chance of securing contentment and success in life. To the community, it means citizens capable of self-support and production. Illness is a loss to the community because it lessens the degree of individual self-support and decreases production.

Even during school days such a loss is important. Consider the case of a high-school pupil whose health is so poor that he fails to make his promotion at the end of the year. For him it means a year lost in getting to his chosen work; for his parents it means another year of supporting him; for the community it means one year more of supplying him with schooling, and one year less of productive work from him.

Wholly aside from the standpoint of work and money, however, health is worth attaining because it adds joy to life. To be well and strong is not merely economical and productive; it is the most free and joyous way to live.

Health is to a large extent related to habits of living. Even though some persons are born with a poorer health inheritance than others, many physical weaknesses can be overcome. Often a person who starts life with a physical handicap improves in vigor as the years go on, whereas some persons who have had a good start waste their health because

they do not value the gift which came to them without effort on their own part.

The whole field of personal hygiene cannot be covered here but we may point out a few of the important guideposts along the road to health.

Preparation of the child for entering school. — Going to school for the first time is an important event in a child's life. He should have a favorable start. Three or four months before his entrance to school he should be taken to a physician or clinic for a careful physical examination. Any defects found by the physician, such as diseased tonsils, defective eyesight, or postural defects, should receive treatment immediately. The teeth should be repaired by a dentist. Every effort should be made to maintain in the child that high degree of health which shows itself in a well-developed body, erect posture, clear skin, bright eyes, good color, alert expression, and good disposition. Parents do a great service to their children when they send them to school in the best possible physical condition, with good mental attitudes already established.

Growth. — Some children grow faster than others, and the rate of growth for any child varies at different periods. Over several months, however, a child may be expected to show a gain in height and weight somewhere near the average for his age.

Girls from five to eight years old average a gain of $4\frac{1}{2}$ pounds per year. From eight to eleven years of age, they average a gain of about 6 pounds. Between eleven and fourteen they make their most rapid growth, averaging about 9 pounds a year. After fourteen, the growth is a bit less rapid, and from fourteen to sixteen the average gain per year is

again 6 pounds. From sixteen to eighteen years it is only 3 pounds per year.

Boys, during the early years, gain at the same rate as girls. From five to eight they average $4\frac{1}{2}$ pounds per year, and from eight to twelve, 6 pounds. The period of rapid growth is somewhat later for boys than for girls. It comes at twelve rather than at eleven, but once this period of rapid growth begins, the boys gain faster than the girls, averaging 12 pounds a year from the ages of twelve to sixteen. From sixteen to eighteen the gain averages only 6 pounds per year.

Because of the fact that the girls begin their more rapid growth at an earlier age, there is a brief period when girls are on the average taller and heavier than boys. The boys soon overtake them, however, and from that time on are superior in both height and weight.

Every child cannot be exactly average weight for his height and age because an average is made from children of different sizes who are growing at different rates. Some persons are naturally small and some are naturally large. Every child, however, should make a measurable gain over a period of months. If a child fails to gain for three successive months, it is well to give attention to his habits of living because some shortcoming in these habits may account for the retardation of growth. If improved habits do not bring results, he should be examined by a physician to find out whether he has some physical defect which is hindering his growth. Such defects as diseased tonsils or adenoids, bad teeth, and defective eyesight have a marked effect upon gains in height and weight.

Food. — Since the body must actually be built from substances in food, it is evident that the food of growing children is a most important item in their care. In order to feed

children properly one must understand what foods are needed in the daily diet, what foods should be avoided, and what habits of eating are important.

The general classification of foods and their use have already been discussed in an earlier chapter. The particular needs of the growing child will be considered briefly here.

Proteins are of great importance during the years of growth because they supply the material for the developing muscles. What foods contain the best proteins for children?

The carbohydrates and fats are also important, for children are very active and 'burn up' a great deal of food in their hours of vigorous play.

The amount of calcium and phosphorus in the diet needs special attention at this time in order to provide abundant building material for teeth and bones. What foods furnish these substances? Which one supplies the greatest amount of calcium?

It is easy to see that iron, too, needs special consideration, since the presence of iron enables the body to build good red blood which gives vitality and energy. What foods supply iron?

Vitamins are the substances which stimulate growth, promote health, and protect against certain diseases. It has been clearly demonstrated through experiments with animals that growth and good bodily development are in a large measure dependent upon the presence of certain vitamins in the diet. Can you name the foods which are rich in vitamins?

You have already learned a great deal about the importance of roughage. Remember that habits are being fixed during youth. The child who eats properly and establishes the habit of daily elimination not only has a better chance to

grow, but is also developing habits which are likely to persist in later years.

Certain foods should be avoided or used only in small amount. Fried foods are hard to digest and are undesirable in the diet of a growing child. Highly-seasoned foods are to be avoided because they are likely to hinder digestion and spoil the taste for such foods as milk and vegetables. Sweets may be used in small amounts at the end of a meal; but when used in large amounts or eaten between meals, they spoil the appetite for other foods. Tea and coffee are harmful for boys and girls because they are too stimulating, and because they take the place of milk without furnishing the nourishing elements which milk supplies.

A proper amount of food is essential. Three regular meals a day, with no eating between meals except fruit or milk, will supply enough food for the average boy or girl. Breakfast and luncheon should not be slighted or omitted. A good breakfast not only makes one feel better during the forenoon, but it is also important because it furnishes nourishment which is needed for play and growth. If breakfast is omitted, it is difficult for a child to make up in other meals the amount of food needed for the day. The same may be said of luncheon. The diet from day to day must be adequate in kind and amount.

Certain habits of eating are important. Eating slowly and chewing the food well aids digestion. To be cheerful and avoid quarrelling or fretting at meal time increases the activity of the digestive tract.

Sleep and rest.—The whole body benefits from sleep. The mind and nervous system have a complete rest; the muscles relax and the heart does less work; the body repairs

itself and grows. The effect of long hours of sleep shows itself not only in growth, but also in posture, personal appearance, disposition, and the ability to think and work.

Most adults need at least eight hours of sleep and some need more than that. High-school boys and girls need an average of at least nine hours of sleep a night.

Open windows at night make sleep more refreshing. Cool, outdoor air, with its motion and slightly varying temperatures, has a marked effect upon the body. Sleeping in an airy room makes one feel better both physically and mentally.

A short rest at noontime or after school is helpful for those who get tired easily or fail to grow as fast as they should. Indeed, many adults make a practice of the noonday nap. The ability to relax quickly is a desirable habit to possess for it enables one to secure the greatest amount of rest possible within a given time.

Sunshine. — Scientific studies indicate that exposure to sunshine is an important factor in health. You have already learned that rickets can be prevented or cured by exposure to direct sunlight and that life out of doors is essential for the proper development of the baby and young child. Sunlight also plays an important part in the growth of older boys and girls.

Remember that ordinary glass removes some of the most valuable of the sun's rays, and that clothing prevents the body from getting the full benefit of sunshine. It is desirable to spend some time every day out of doors, and to use whatever opportunities are available in summer for swimming and playing on the beach. One should avoid a severe sunburn, which may be not only painful but even harmful to the body. The body should be exposed to the sun's rays for only

a short time at first, and then the length of time should gradually be increased until the skin develops a coat of tan.

Exercise. — The body as a whole benefits from exercise. The digestive organs are shaken up and the muscles of the abdomen which hold them in place are strengthened and invigorated.

The lungs are enlarged by being filled more completely than in ordinary breathing. Rapid breathing and better circulation increase the amount of oxygen which is taken from the lungs to all parts of the body.

The heart is strengthened through exercise and becomes a more valuable health asset. However, one who has a weak heart should always follow the doctor's orders in regard to exercise.

Exercise also helps the body to regulate its temperature. The circulation is trained to adjust itself more quickly to changing conditions. Persons who do not exercise regularly are more sensitive to cold than those who do. A good circulation keeps one warm and helps to keep one free from colds.

The mind benefits, too, from exercise; it has a rest from study and work. That is why play refreshes us when we are mentally tired.

Nearly everyone enjoys outdoor exercise. There is sometimes a temptation for older girls to become so much involved with indoor activities that they have no time for outdoor life. This is a great mistake. Exercise in the open helps a girl to be strong and well, adds greatly to her good looks, and helps her to develop into an attractive young woman.

Teeth. — The second, or permanent, teeth are all completely formed within the jaws while the first teeth are still in use. They are larger and are intended to last throughout life

In the second set, the first teeth which appear are the six-year molars. These come through just back of the baby teeth and are often mistaken for teeth of the first set. Between the ages of six and twelve the baby teeth fall out and are replaced with permanent ones. Then the twelve-year molars come through back of the six-year molars. The four wisdom teeth appear at the age of seventeen or older and complete the permanent set of thirty-two teeth. Much has been said in earlier chapters about the care of teeth in young children. Care during the adolescent period cannot wholly make up for neglect during early childhood, but it is extremely important. Everything possible should be done at this time to help the body meet the strain put upon it by rapid growth. A clean mouth with sound teeth is a decided asset to growth and health.

The important factors in the care of teeth at this age are the same as for younger children: (1) eat foods which furnish minerals and vitamins, (2) eat hard foods which require chewing and give exercise to the teeth, (3) visit the dentist at least twice a year, (4) keep the mouth clean by brushing the teeth at least twice a day.

Posture. — Good posture adds to a girl's attractiveness. It is also an aid to health because a correct position of the body gives better opportunity for the proper functioning of the organs.

The points of good standing posture are as follows: feet a little way apart with toes pointing straight ahead, chin in, chest high, abdomen flat, back straight, weight balanced over the ankles, and hands relaxed at the sides.

The points of good sitting posture for work are as follows: hips well back in the chair, feet resting on the floor, chin in,

chest high, abdomen flat, and back straight (without exaggerated curve either at the waistline or shoulders). The chair and desk should be of such height that the feet touch the floor, the knees are not cramped, and the arms rest on the desk without pulling the shoulders out of position.

In order to have good posture, one must do two things, — first, build a vigorous body through sleep, exercise, and other health habits, and second, train himself to hold his body in a good position.

If you have good posture, take pride in it and try to maintain it as you grow older. If your posture is poor, seek advice from your physical education teacher or some other person who understands how to help you.

Cleanliness. — Cleanliness is important because it helps to protect against harmful bacteria, increases personal attractiveness, and stimulates both body and mind.

In order to keep the skin really clean, one needs at least two warm baths a week, for only warm water can remove the oily deposits which collect on the skin. A daily bath is desirable because of its refreshing effect upon the body. If one does not take a complete daily bath, the soiled parts of the body should be washed every day.

The cleanliness of clothing is important, too. Stockings and underwear need particular attention. Most persons cannot have a complete change of clothing every day. The next best thing is to air the clothing every night. Have fresh stockings every day if you can, and fresh underwear at least twice a week. Changes need to be made more frequently in warm weather than in cold weather. Heavy clothing should be removed indoors so that the skin may be properly ventilated.

It is necessary to give special attention to the cleanliness of

some parts of the body. One perspires freely under the arms because cool air cannot reach this space. As a result, disagreeable odors develop unless one is particularly careful. The feet perspire, too, and if rubbers are not removed in the house, the amount of perspiration is increased. This not only produces an unpleasant odor but it makes the skin tender.

The skin of the scalp also needs special attention. Most girls like to have a shampoo at least once in two weeks.

The hands come in contact with dirt more often than any other part of the body, and for this reason they require more frequent washing. Because the hands are used for handling food, it is especially important to wash them thoroughly before eating so that one will avoid carrying harmful bacteria into the mouth. Always wash the hands after going to the toilet.

Dirt accumulates easily under the nails. Biting the nails is a bad habit because pieces of sharp nail, with dirt and bacteria attached, are taken into the mouth and passed on to the throat, where they scratch or puncture the soft tissues, causing infection. Biting the nails makes them unsightly and spoils the shape of the fingers. You are likely to be judged by the appearance of your hands. One likes to see clean nails, evenly filed, with smooth cuticle, and finger nails naturally shaped. Hands either add to one's attractiveness or detract from it.

The skin of the face needs special attention because it is exposed to dust constantly and to all kinds of weather conditions. It should be thoroughly cleansed every day with warm water and a good soap, well rinsed, and given a final dash of cold water.

The market is crowded today with countless aids to beauty.

There is, of course, no beautifier which can produce the natural beauty of a healthy, well-cared-for skin. Good powders and cold creams do not injure the skin, though they are not necessary. Many of the widely advertised beauty aids, however, are really injurious to the skin. It is unfortunate that some girls, in their desire to add to their attractiveness, make themselves look as though they were wearing false faces. Indeed, by their display of such bad taste they lose the natural beauty and charm which they might otherwise have.

Every girl should be fastidious in regard to her personal cleanliness. Remember, however, that a really beautiful skin is built from the inside out. A girl cannot hope to keep a lovely skin unless she lives up to the health rules in regard to food, sleep, and exercise.

Annual physical examination.— Even with the best habits of daily living, disorders may appear within the body. These can be discovered through the annual physical examination.

Many slight disorders which are not particularly serious but which may be a handicap can be corrected once they are known. Many degenerative diseases of heart, kidney, and other parts of the body can be controlled or completely cured if they are discovered in the early stages. The practice of an annual physical examination enables one to keep the body in better repair, thereby increasing health and efficiency, and it may even add years to the length of life.

REVIEW

1. Why does it seem worth while to you to do the things necessary to keep yourself in good health?
2. What is the average gain per year for your age? How much have you gained during the past year?
3. Discuss the important facts about food for growing boys and girls.
4. Discuss sleep — the amount needed, the best conditions for sleep, and the effects of sleep upon the body.
5. What benefits can you derive from outdoor exercise? What kinds of exercise do you enjoy?
6. Give the important points in caring for the teeth. Are your teeth clean and in good repair?
7. Why is it desirable for a girl to have good posture, and how can she develop it?
8. Discuss the importance of cleanliness.
9. What is the value of an annual physical examination? Have you had one during the past year?

SUGGESTED ACTIVITIES

1. Add to your scrapbook illustrations to show a good breakfast, dinner, and supper for girls of your age, using foods which are in the market at the present time. Add any other material suggested by the chapter.
2. Demonstrate how to stand in good posture; how to sit in good posture for work.
3. Score yourself on the points given in the Health Score Card in the Appendix.

CHAPTER XXIII

THE NURSING PROFESSION

Many of you have chosen your careers already. If so, you are planning your education to reach that goal. Remember that in any field, good health and thorough training are two of the most important factors for success. To those who have a natural liking and capacity for nursing, this profession has much to offer. The work demands women of stable character, good health, and high purpose.

Training schools. — Practically all the large hospitals in the country (and many of the smaller hospitals) have their training schools for nurses. Nearly all of the superintendents of these training schools in the United States are women. As early as 1798, a course of lectures for nurses was given in the New York Hospital. In Philadelphia in 1839, the Nurses' Society was organized, and in 1863, the Woman's Hospital of Philadelphia received its first pupils. A training school for nurses was organized at the Bellevue Hospital in New York in 1870. Another was opened in 1872 at the New England Hospital for Women and Children.

There has been a rapid increase in the number of training schools. In 1880 there were 15 schools with 323 pupils and 157 graduates; there are now over 1800 schools with more than 55,000 pupils and 15,000 graduates. Ten per cent of these schools are affiliated with colleges and universities.

Entrance requirements. — The standards of entrance requirements have been continually raised to a higher level. Admission to the better training schools requires a high-school education or its accepted equivalent. High-school work in preparation for nursing should include English, elementary science, chemistry, biology, Latin, and some higher mathematics. At several training schools with university affiliations, the requirements for admission are four years of secondary-school work and at least two years of college work with credits showing at least fifteen hours per week in acceptable subjects. These courses lead to a bachelor's degree. At other schools graduates receive a diploma.

The age for admission is usually from eighteen to thirty. The student is given board and lodging and furnished with a certain amount of laundry service. Many schools give a monthly allowance and the pupils furnish their own uniforms, books, and other materials. The schools of more advanced educational standards furnish uniforms and books, but charge a tuition fee.

The applicant must be in good health and free from physical defects. A certificate is required showing successful vaccination for smallpox sometime during the preceding year. Many schools require a dental certificate showing that the teeth are clean and cavities filled.

The nurse's training. — There is a preliminary term during which the pupil is on probation. This period varies from three to six months in different schools. Systematic classroom instruction in elementary nursing is given and the pupil's aptitude for nursing is observed. At the end of the probation period the applicant is either accepted as a member of the school or rejected. The various activities in a nurse's train-

ing include: (1) classroom work under instructors who teach and demonstrate nursing procedures, (2) practice work and demonstration in classroom by the students, (3) practice in the wards under supervision, (4) lectures and laboratory work given by members of the medical staff on anatomy, physiology, medicine, surgery, bacteriology, etc., (5) dietetics and cooking taught by lectures, with practical experience in the diet kitchen and in wards, and (6) practical work in wards, operating rooms, and dispensary, in social service, and in the administrative department.

The regular course of study requires three years. A four-year course is offered by a few of the university schools. Most hospitals are required by law to give not more than eight hours of duty daily to a pupil nurse.

Selecting a school. — In selecting a school one should choose on the basis of securing the best educational advantages. Schools which are associated with universities or colleges have educational opportunities which others cannot offer. They have better equipment, finer laboratories, and larger libraries; they require less of the household duties which are of little or no educational value to the nurse; and they provide a superior teaching staff. The prospective nurse should make a careful study of requirements, teaching facilities, and living conditions before selecting her training school.

Opportunities for the graduate nurse. — There are many opportunities open to the qualified graduate nurse from a training school of good standing: institutional positions, educational work, public health, private duty, government service, and missionary work.

The various institutional positions which are open to nurses

include: superintendent of a hospital or school of nursing, head nurse in a hospital ward or operating room, and supervisor of dispensary or clinic.

For the nurse with a sound educational background combined with some teaching ability and experience, there are many openings in the field of education. The demand far exceeds the supply. Some of the positions for this type of nurse are: health counsellor, home-nursing instructor, and dean of girls.

With the steady growth of the health movement in this country, the services of the nurse are in constant demand for public-health work. Such positions include those of visiting nurse, school nurse, child-welfare nurse, medical-social-service worker, and industrial nurse. There are also many administrative positions open to the public-health nurse.

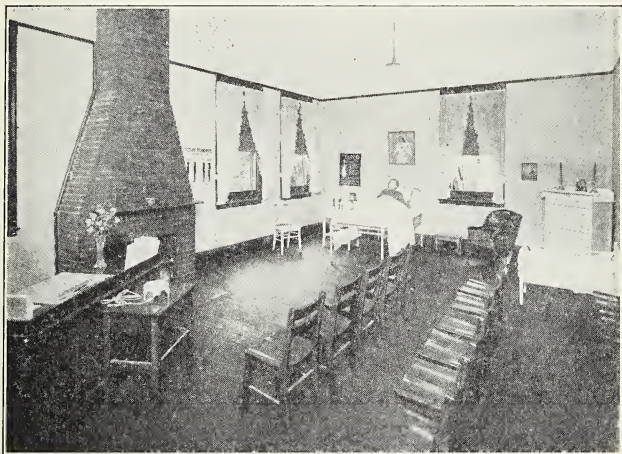
The private-duty nurse has countless opportunities to serve and comfort the sick and to influence others in matters of personal and community health. As a nurse in the army, navy, federal public-health service, or Red Cross, a young woman may serve her country in peace and in war, at home or abroad.

There are many home missions in Labrador, Alaska, the Indian reservations, and the mountainous regions of the South which need the service of nurses. Foreign missions in China, India, and the Near East are constantly calling for women of the nursing profession.

Many women from the field of nursing, as from other professions, marry and have homes of their own. Certainly this professional training gives an ideal preparation for homemaking.

APPENDIX

CLASSROOM EQUIPMENT



A WELL-EQUIPPED CLASSROOM FOR TEACHING
HOME NURSING

Room Equipment

- Single iron bed (2, if possible)
- Bedside table (linen scarf, table lamp, covered pitcher or bottle for water, drinking glass, small hand bell)
- Dresser or chest of drawers for linen
- Straight-back chair (1 or 2)
- Footstool
- Baby crib
- Medicine cabinet
- Arm chair (if possible)
- Mattress for bed
- Crib mattress (firm cotton or hair)

Pillows (standard size — 3 or 4)
Pillows (small — 1 or 2)
Electric plate
Lavatory or satisfactory source for running water
Chase doll (adult size)
Chase doll (infant size)

Linen

Large sheets (yard longer and yard wider than bed — 6 or 9)
Blankets (large — 1 or 2)
Bed spreads (3)
Table covers (2)
Pillowcases (large — 6)
Pillowcases (small — 2)
Face towels (3)
Bath towels (3)
Face cloths (3)
Bath cloths (3)
Rubber sheeting (a yard more than width of bed)
Nightgowns (adult size — 2)
Bath blanket (1)
Bedpan cover (1)
Dust cloths (3)

Baby linen

Crib sheets (6)
Crib blanket (1)
Wrapping blanket (1 or 2)
Crib spread (2)
Baby towels (3)
Baby cloths (3)
Quilted pads (2)
Nightgowns (infant size — 2)
Shirts (infant size — 2)
Bands (2)
Sleeveless bands (infant size — 2)
Diapers (6)
Rubber sheeting to cover crib mattress
Mosquito netting for crib

Articles needed for teaching and demonstrations

Face basin (1)
Foot tub or large oval basin (1)
Pitchers, white enameled (1 quart-size, 1 pint-size)
White enameled treatment basins (2)
Dust basin (1)
White enameled "Perfection" bedpan
Hot-water bag and cover
Ice cap and cover
Stupes and stupe wringer

Compresses

Trays (1 small, 1 medium-size)

Serving tray

Bed tray or substitute

Back rest

Bed cradle

Small clothes rack

Measuring glass

Clinical thermometers (at least 6)

Bath thermometer (1)

Medicine cabinet supplies (see special section in Appendix)

First-aid supplies (see special section in Appendix)

Folding rubber bath tub } for baby

Boric-acid powder }

Dishes for setting a tray

Dinner plate

Luncheon plate

Bread-and-butter plate

Cup and saucer

Individual teapot or coffeepot

Salt and pepper shakers

Sugar and creamer

Knife (1)

Forks (2)

Teaspoons (3)

Dessertspoon (1)

Tablespoons (2)

SUGGESTED SUPPLIES FOR THE HOME MEDICINE CABINET

Medicines

Mild cathartic
Castor oil
Epsom salts
Sodium bicarbonate
Essence of peppermint
Aromatic spirits of ammonia

Antiseptics and disinfectants

Rubbing alcohol
Boric-acid powder
Tincture of iodine
Lysol
Green soap (liquid antiseptic soap)

First-aid supplies

Carron oil (or picric acid gauze)
Vaseline (or albolene)
Sterile gauze (1 pkg.)
Sterile cotton (1 pkg.)
Gauze bandages (1-inch, and 2½- or 3-inches)
Triangular bandage
Blunt scissors
Adhesive tape
Jar of toothpick swabs

Miscellaneous appliances

Thermometer (mouth clinical) in case
Medicine glass
Medicine dropper
Eyecup
Drinking glass

HEALTH SCORE CARD FOR BOYS AND GIRLS IN JUNIOR HIGH SCHOOL

I. Signs of Health

Score

1. Can you work and play without being more than naturally tired at bedtime? 40
2. Are you rested when you get up in the morning? 40
3. Is your appetite for wholesome food good? 30
4. Do you gain weight regularly? (Or have you failed to gain for three successive months?) 40
5. Have you gained the expected amount for your age since ——? 50
(Let teacher decide period of time.)
6. Is your posture good? 40
7. Are your feet strong and free from any defect? 20
8. Are your muscles strong and firm? 20
9. Is your vision either normal or corrected by glasses? 20
10. Can you hear ordinary conversation at sixteen feet? 20
11. Is your skin clear? Color good? 20
12. Is your hair glossy, but free from excessive oil? 20
13. Are your teeth either sound or filled? 30
14. Are you free from constantly recurring illness, including colds? 30
15. Are your nose and throat free from defects, or treated in accordance with medical advice? 30

Score

450

II. Health Practices

1. Do you drink at least two glasses of milk every day? 20
2. Do you eat fruit at least once a day? 20
3. Do you eat at least one vegetable, other than potato, every day? 20
4. Do you eat an uncooked vegetable at least three times a week? 20
5. Do you eat some dark bread every day? 10
6. Do you drink at least six glasses of water every day? 20
7. Do you refrain from using tea and coffee? 10
8. Do you eat sweets in moderation and only at the end of a meal? 20

Score

9. Do you eat only at mealtime? (Fruit and milk may be excepted.)	20				
10. Do you eat your meals at a regular time each day?	20				
11. Do you eat slowly and chew your food well?	20				
12. Do you eat a good breakfast, with either cereal or egg as a basis?	20				
13. Do you have a daily scrub with warm water and soap, including at least face, neck, ears, hands and arms, and wash your hands regularly before meals?	10				
14. Do you have a daily tonic bath with cold water in the morning (either shower, tub, or splashing on face, throat, and chest) or a dry rub with a rough towel?	10				
15. Do you take a full warm bath at least twice a week?	10				
16. Do you brush your teeth and gums at least twice a day?	10				
17. Do you clean your finger nails every day and refrain from biting them?	10				
18. Do you average at least ten hours of sleep every night?	30				
19. Do you have a window open?	20				
20. Do you average at least two hours of outdoor exercise every day?	30				
21. Do you have a bowel movement every day?	30				
22. Do you try to maintain your best standing and sitting posture?	20				
23. For school and work do you wear shoes with low, broad heels?	10				
24. Do you remove outdoor clothing when you are indoors — heavy sweaters, suede jackets, rubbers, overshoes?	10				
25. Do you have a complete physical examination by a physician once a year?	50				
26. Do you have your teeth examined and treated by your dentist at least once a year?	40				
27. Have you been vaccinated?	20				
28. Have you been immunized against diphtheria? (Negative Schick Test is O.K.)	20				
Score	550				
TOTAL SCORE	1000				

AVERAGE WEIGHTS
WEIGHT — HEIGHT — AGE TABLES FOR GIRLS
FROM BIRTH TO SCHOOL AGE

Height Inches	1 mo.	3 mos.	6 mos.	9 mos.	12 mos.	18 mos.	24 mos.	30 mos.	36 mos.	48 mos.	60 mos.	72 mos.
20	8											
21	9	10										
22	10	11										
23	11	12	13									
24	12	13	14	14								
25	13	14	15	15								
26		15	16	17	17							
27		16	17	18	18							
28			19	19	19	19						
29			19	20	20	20						
30			21	21	21	21	21					
31				22	22	23	23	23				
32					23	24	24	24	25			
33						25	25	25	26			
34						26	26	26	27			
35						29	29	29	29	29		
36							30	30	30	30	31	
37							31	31	31	31	32	
38								33	33	33	33	
39								34	34	34	34	34
40									35	36	36	36
41										37	37	37
42										39	39	39
43										40	41	41
44											42	42
45												45
46												47
47												50
48												52

Prepared by Robert M. Woodbury, Ph.D.

Children's Bureau, U. S. Department of Labor, 1923.

Weight is stated to the nearest pound; height to the nearest inch; age to the nearest month.

Weights of children under 35 inches were taken without clothing; those of children above 35 inches with clothing (shoes, coat, and sweater removed)

Courtesy of American Child Health Association

AVERAGE WEIGHTS

WEIGHT — HEIGHT — AGE TABLES FOR BOYS

FROM BIRTH TO SCHOOL AGE

Height Inches	1 mo.	3 mos.	6 mos.	9 mos.	12 mos.	18 mos.	24 mos.	30 mos.	36 mos.	48 mos.	60 mos.	72 mos.
20	8											
21	9	10										
22	10	11										
23	11	12	13									
24	12	13	14									
25	13	14	15	16								
26		15	17	17	18							
27		16	18	18	19							
28			19	19	20	20						
29			20	21	21	21						
30			22	22	22	22	22					
31				23	23	23	23	24				
32				24	24	24	25	25				
33					26	26	26	26	26			
34						27	27	27	27			
35						29	29	29	29	29		
36							30	31	31	31		
37							32	32	32	32	32	
38								33	33	33	34	
39								35	35	35	35	
40									36	36	36	36
41										38	38	38
42										39	39	39
43										41	41	41
44											43	43
45											45	45
46												48
47												50
48												52
49												55

Prepared by Robert M. Woodbury, Ph.D.

Children's Bureau, U. S. Department of Labor, 1923.

Weighing children is a means of ascertaining their rate of growth. All children should make a regular annual gain. These tables should be used as a means of interesting parents in their children's growth.

Lay infant on table on which has been placed an accurate measure. Stand child with heels and shoulders against a wall upon which has been marked or pasted an accurate measure.

Encourage the annual physical examination of every child by a physician.

Courtesy of American Child Health Association

GLOSSARY

abdomen, the portion of the body lying between the thorax and the pelvis (area of the hips).

addict, one who gives himself up to a constant practice.

antiseptic, a substance which prevents decay by preventing the growth of bacteria.

antitoxin, a defensive substance developed in the body in reaction to a toxin. It neutralizes the effect of the toxin or poison.

artery, a blood vessel which carries blood away from the heart.

bowels, part of the intestines.

buttock, the part of the body at the back of the hip.

capillary, any one of the minute vessels which conduct the blood from the arteries to the veins.

capsule, a soluble case for enclosing a dose of medicine.

cathartic, a medicine for emptying the bowels.

chronic, long-continued; not acute.

cocaine, a drug which produces sleep and kills pain.

congestion, abnormal accumulation of blood in a part.

constipation, infrequent, difficult, or incomplete discharge of waste from the bowels.

contaminate, to soil or infect by contact.

croup, a disease of the larynx with cough, breathlessness, and difficult breathing.

delirium, a disordered mental state with excitement and illusions.

demulcent, soothing; not drastic or irritating; not stimulating; as oil.

deodorant, a substance which destroys odors.

dextrin-maltose, a malt sugar.

diagnosis, the art or process of determining the nature of an attack of disease.

diarrhea, frequent, loose, or watery discharges from the bowels.

disinfectant, an agent or substance which destroys all infectious organisms.

distention, state of being stretched in all directions; enlarged; swollen.

elimination, the act of expelling wastes.

emetic, a medicine that causes vomiting.

Eustachian tube, canal leading from the inner ear to the pharynx.

excrete, to separate and expel useless matter.

excretion, matter excreted; also the process of excreting.

fontanel, any one of the soft spots on the cranium of a young child.

heroin, a drug which kills pain and produces sleep.

immunization, the process of protecting a person against a particular disease.

incubation, the period between the time when one is exposed to a disease (infected) and the time when the disease appears.

inhalation, the drawing of air or other vapors into the lungs.

- insomnia**, inability to sleep; wakefulness.
- inunction**, the rubbing of the skin with an ointment.
- involuntary**, performed independently of the will.
- isolation**, separation of persons having a communicable disease from other persons.
- jaundiced**, a condition of yellowness of skin and eyes due to bile pigment.
- laxative**, a mild medicine for emptying the bowels.
- lysol**, an antiseptic preparation of tarry oils.
- morphine**, a drug which kills pain.
- mucilaginous drinks**, slimy and sticky drinks; for example, cereal gruel.
- mucous membranes**, membranes lining certain canals and cavities of the body.
- mucus**, a thick, watery secretion of the mucous glands.
- nausea**, a feeling of sickness in the stomach with desire to vomit.
- organism**, any individual animal or plant.
- parasite**, a plant or animal living in or upon another living organism.
- pledget**, a small compress or tuft of cotton or similar substance.
- poultice**, any soft mass of bread, flaxseed, or the like, to be placed hot upon the skin.
- prescription**, a written direction for the preparation and administering of medicine.
- prostration**, extreme exhaustion.
- puncture**, an act of piercing; also a wound made by a pointed instrument.
- quarantine**, place or period of being isolated because of having been exposed to communicable disease.
- rectum**, the terminal part of the intestine.
- rickets**, a disease of childhood in which the bones become crooked and deformed.
- sanitation**, the establishment of conditions favorable to health.
- scurvy**, one of the diseases due to improper food.
- sinus**, a hollow space.
- specific remedy**, a remedy for a particular disease.
- sterilization**, the process of freeing a substance from all living organisms.
- stimulant**, an agent which excites activity within the body.
- suppository**, a solid cone (usually of glycerine and cocoa butter containing medicine) to be inserted into the rectum.
- technique**, the method of procedure and details of any mechanical process.
- toxin**, a poisonous substance.
- urine**, the fluid secreted by the kidneys, stored in the bladder, and expelled in voiding.
- vein**, a blood vessel which carries blood to the heart.
- void**, to cast out, as waste material—for example, passing urine from the bladder.
- volatile**, tendency to evaporate rapidly.

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